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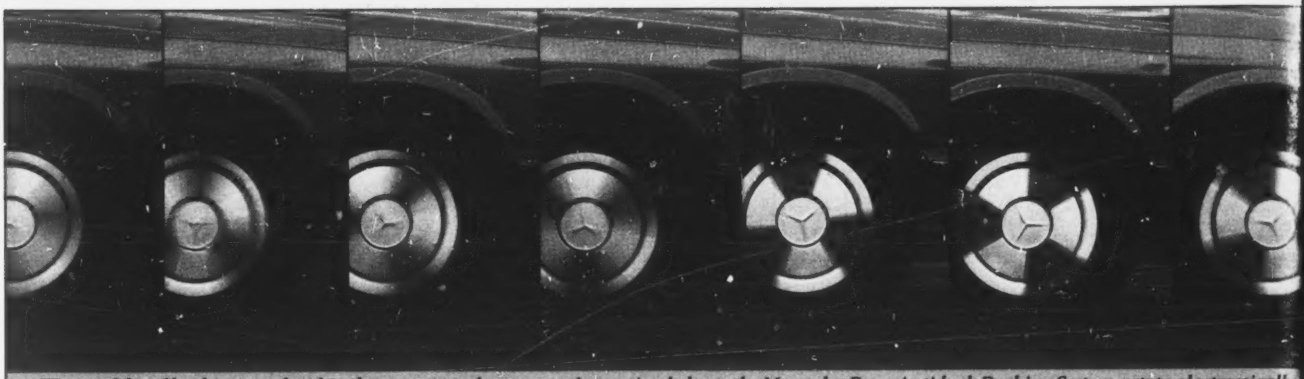

Wet road, hard braking–and within the one-second sequence dramatized above, the Mercedes-Benz Anti-lock Braking System acts to electronically

For 1985, Mercedes-Benz introduces something more important than a new model.

THE MERCEDES-BENZ sedan speeds straight toward a patch of test track slicked down with a diabolical mixture of soapsuds and water.

A splash as the tires meet wet pavement–and then the driver slams on the brakes.

But what seems bound to happen in the next heart-stopping instant, doesn't happen. Violent braking action on that treacherous surface sets off no violent counterreaction.

That Mercedes-Benz sedan simply snubs down to a quick, straight-line stop. Soapsuds and water and all.

THE MERCEDES-BENZ ANTI-LOCK BRAKING SYSTEM COMES TO AMERICA

That Mercedes-Benz sedan has just demonstrated the most emotionally reassuring advance in passenger car braking control since the disc brake.

It is the Mercedes-Benz Anti-lock Braking System, or ABS. And having pioneered both its early development and its subsequent use in production automobiles, Mercedes-Benz now proudly introduces this significant engineering feature to America. It is being fitted as standard equipment to every 1985 Mercedes-Benz 500SEC Coupe, 500SEL Sedan, 380SL Coupe/Roadster, 380SE Sedan and 300SD Turbodiesel Sedan, and as an extra-cost option to the 190E 2.3 and 190D 2.2 Sedans.

Functioning in concert with the car's four-wheel disc brakes, the Mercedes-Benz Anti-lock Braking System is meant to first sense the impending lockup of one or more of the car's wheels in a sudden braking emergency –then to act, with lightning speed, to avert it.

The benefits are clear. By minimizing the risk of the car's wheels locking up in hard braking, the system can also minimize the potential consequences: the sudden loss of tire adhesion that could turn a steerable vehicle into a sliding object no longer under the driver's full control.

More reassuring still, the system is designed for braking emergencies on slippery-wet roads as on dry roads–indeed, to maintain optimum braking performance almost regardless of road surface conditions.

SENSING TROUBLE BEFORE IT BECOMES TROUBLE

The decision-making "brain" of the Mercedes-Benz Anti-lock Braking System is an on-board computer. Electronic sensors, placed at both front wheels and at the drive pinion of the rear axle, are the system's vital nerve ends.

In a moving car under normal driving conditions, those sensors are constantly signaling the rotational speed of the wheels to the computer. Registering a millisecond-by-millisecond electronic bulletin on the precise state of adhesion between the car's tires and the road surface.

Then comes that sudden emergency. The driver reacts to danger ahead by reflexively hitting the brake pedal hard; hard enough, in a conventional braking system, to risk locking up one or more of the car's wheels.

But those electronic sensors

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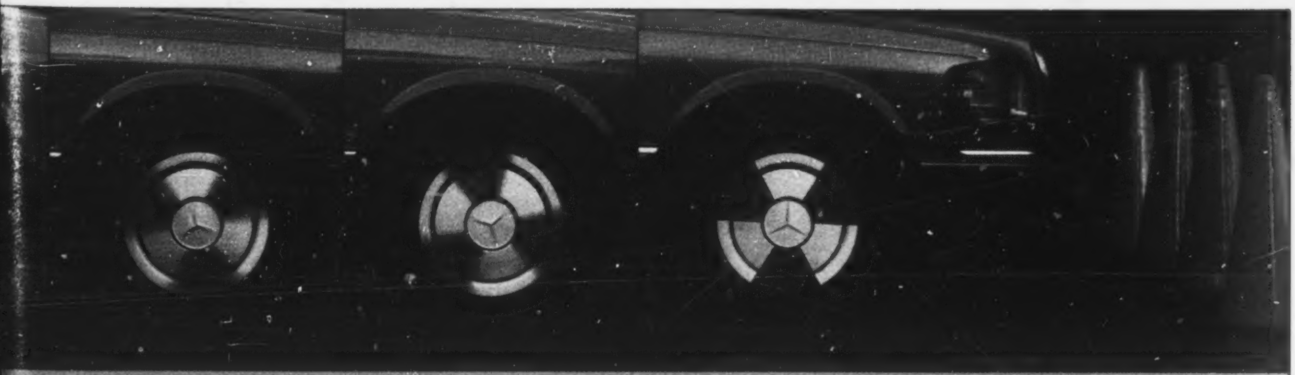

modulate braking action as often as 10 separate times. Preventing wheel lockup–and keeping the car precisely steerable throughout.

have already detected the onset of wheel slip and alerted the computer. And the computer starts regulating fluid pressure in the brake lines. Modulating and cadencing brake pressure, via solenoid valves in the brake lines, as often as *ten times* per second. Countering lockup of all four wheels or any individual wheel.

And thereby allowing the car to be swiftly and smoothly decelerated. Allowing the car to be precisely steered and maneuvered *as* it decelerates. Helping the driver to avoid a collision, or simply to stay on the road.

6,000,000,000 MILES

Mercedes-Benz began development work on the principle of the anti-lock braking system as far back as 1959, first fitted a working system to a production automobile in 1978, and has since seen 250,000 of its cars roll up over *six billion miles* of experience with the system worldwide.

Once again following where Mercedes-Benz has shown the way, some domestic and foreign makers will shortly introduce similar anti-lock braking systems to America. They can emulate the idea. They cannot emulate this depth of experience.

More than 50 percent of the logic circuitry programmed into that on-board computer is safety circuitry: the entire system is designed to be electronically self-checking, constantly monitoring itself and primed to shut down instantly should a malfunction ever be indicated. The car's separate four-wheel disc brake system would, of course, remain fully operational.

In terms of enhancing control of the car in a braking emergency, the Mercedes-Benz Anti-lock Braking System may be the best ally a driver has ever had. In terms of automotive leadership, this major advance underscores the truth of the motto below: for 1985, as for the past 99 years, the automobiles of Mercedes-Benz are indeed engineered like no other cars in the world.

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TABLE OF CONTENTS

9 **PREFACE**

11 **NEW TECHNOLOGICAL DEVELOPMENT IN THE FEDERAL REPUBLIC OF GERMANY**
Neue technologische Entwicklungen in der Bundesrepublik Deutschland
Dr. Martin Bangemann
Economics Minister of the Federal Republic of Germany

27 **VENTURE CAPITAL IN THE HIGH-TECH AGE**
Die Rolle des Venture Capital in einem hochtechnisierten Zeitalter
Malcolm Baldrige
United States Secretary of Commerce

ECONOMICS AND FINANCE

39 **THOUGHTS ON INTERNATIONAL MONETARY POLICY**
Ueberlegungen hinsichtlich der internationalen Geldpolitik
Dr. Karl Otto Poehl
President, Deutsche Bundesbank

49 **OVERVIEW ON U.S. ECONOMY**
Ueberblick ueber die US-Wirtschaft
Paul A. Volcker
Chairman, Board of Governors of the Federal Reserve System

TECHNOLOGY AND THE FUTURE

59 **NORTH RHINE-WESTPHALIA—OLD MINING AREA MOVES INTO MODERN INDUSTRY**
Nordrhein-Westfalen—Vom Land der Zechen zum modernen Industriestandort
Johannes Rau
Governor of the State of North Rhine-Westphalia

69 **HIGH TECHNOLOGY: A VITAL PART OF CALIFORNIA'S ECONOMIC DIVERSITY**
High Tech: Ein vitaler Zweig im Spektrum der kalifornischen Wirtschaft
George Deukmejian
Governor of the State of California

77 **BADEN-WUERTTEMBERG PROMOTES FUTURE TECHNOLOGY**
Baden-Wuerttemberg treibt Zukunftstechnologien voran
Lothar Spaeth
Governor of the State of Baden-Wuerttemberg

83 **TECHNOLOGICAL MODERNIZATION AND RISK CAPITAL IN BERLIN**
Technologische Erneuerung in Berlin
Elmar Pieroth
Minister of Economics and Transportation of the State of Berlin

INVESTMENT AND BANKING

93 **NEW DEVELOPMENTS IN WEST GERMANY'S FINANCIAL MARKETS**
Deutsche Finanzmaerkte im Wandel
Kurt Morgen
Member of the Board of Directors of the Dresdner Bank AG, Frankfurt

103 **TRADITION AND PROGRESS: PLANNING FOR SUCCESS IN U.S. OPERATIONS**
Tradition und Fortschritt
Erfolgreiche Planung fuer US-Geschaefte
Walter F. O'Connor
Vice Chairman, International
Peat, Marwick, Mitchell & Co.

115 **VENTURE CAPITAL: FINANCING THE NEW IDEAS OF A CHANGING WORLD—A U.S.-GERMAN PERSPECTIVE**
Venture Capital—Finanzierung neuer Ideen in einer sich wandelnden Welt
Charles F. Bacon
President of Consortia, Inc., Boulder, Colorado

123 **DO'S AND DONT'S IN SELECTING MANAGERS FOR FOREIGN OPERATIONS**
Was ist bei der Auswahl eines Managers fuer das Auslandsgeschaeft zu beachten
Fortunat F. Mueller-Maerki
Partner, Egon Zehnder International, Inc.

129 **GERMAN INVESTMENTS IN U.S. REAL ESTATE**
Tips fuer deutsche Kapitalanleger bei Grundstuecksgeschaeften in den USA
Dr. Thomas R. Kabisch
Lehndorff Vermoegensverwaltung AG
(Lehndorff Property Management, Hamburg)

PROFILES

136 **GERMAN AND AMERICAN COMPANIES**
Deutsche und amerikanische Unternehmen
Cities, States, and Trade Fair Organizations / Staedte, Laender und Messegesellschaften

FACTS AND FIGURES

188 **Statistics / Statistiken**
Information Sources / Informationsquellen

206 **Acknowledgements, List of Advertisers / Quellenangaben / Anzeigenverzeichnis**

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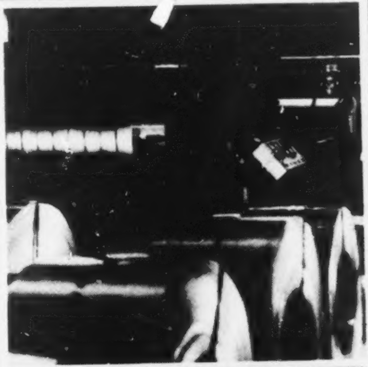

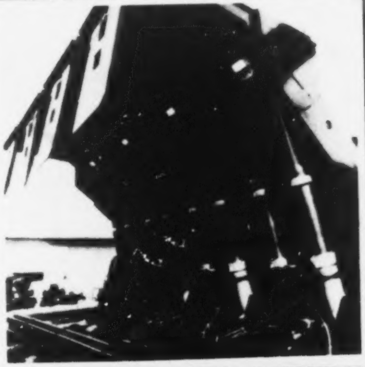

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PREFACE

German enterprises apparently seem to have overcome the "Japan syndrome" of the late 70's. This was indicated at least by a survey of about 14,000 companies in the Federal Republic by the Deutscher Industrie- und Handelstag. Less than 10 percent of the firms interviewed viewed themselves as having a technological disadvantage compared to their foreign competition.

In fact, German exporters have made a significant recovery internationally. For example, the Bundesverband der Deutschen Industrie has determined that machinery manufacturers in the Federal Republic of Germany have succeeded in taking over first place in the world's machinery trade from their leading American competitors.

Many markets which had temporarily been lost have now been regained. Certainly the high dollar exchange rate has facilitated German exports. The decisive competitive advantages for companies from the Federal Republic, however, still lie in the broad range of products which they can offer, punctual delivery, quality, service, exactness of specifications, and willingness to fulfill the customers' special requirements.

With some exceptions German industry is also competitive on world markets in the high technology sector. German firms believe that they have now overcome previous disadvantages in such areas as electronically controlled machine tools, production technology in the automobile industry and biotechnology. Based on a study by the Federal Ministry of Economics, however, certain weaknesses apparently remain in the areas of microelectronics and information technology.

Above all, the Americans have a definite advantage over their German competitors regarding the character of their markets. Many things are approached more dynamically and unconventionally in the U.S. And as in Japan, the path from invention to marketable innovation is much shorter and faster in the U.S. than on the European continent. In addition, both those countries have relatively large home markets for testing innovations.

One significant force behind the growth of high technology in the United States has proved to be the availability of venture capital. In contrast to investors in the Federal Republic of Germany, those in America are more willing to back promising but risky projects.

In the present UNITED STATES-GERMAN ECONOMIC SURVEY, leading politicians, economists and businessmen from both countries express detailed views on the subjects of high technology and venture capital. Further points of emphasis include the pressing international currency issues and investment developments in the two partner countries.

Werner Walbrol
Executive Director
German American Chamber of Commerce

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New Technological Development in the Federal Republic of Germany

by Dr. Martin Bangemann
Economics Minister of the
Federal Republic of Germany

1. We are all familiar with it in gangster films: a car travelling at speed shoots out over the pier, and hangs for a fateful moment in the air before plummeting into the sea. That is the shock Bruce Nussbaum, co-editor of "Business Week", sees in store for the Federal Republic of Germany in his book "The World After Oil", published in 1983. "West Germany today is a nation confidently moving through the twentieth century blindly unaware of the economic catastrophe that has already befallen it." The Germans continue "to make the best nineteenth-century products on earth – heavy turbines, wonderful cars and precision tools." But they "cannot make the change from mechanical engineering to bioengineering."

But German firms apparently see things differently. A recent survey of altogether 14,000 companies by the Federation of German Chambers of Industry and Commerce showed that the majority do not in any way view themselves behind the Americans or the Japanese in international competition. They put themselves at the top of the list. Not even 10% of the firms questioned admitted that there was a technology gap to foreign competitors in their industry.

"West Germany today is a nation confidently moving through the twentieth century blindly unaware of the economic catastrophe that has already befallen it."

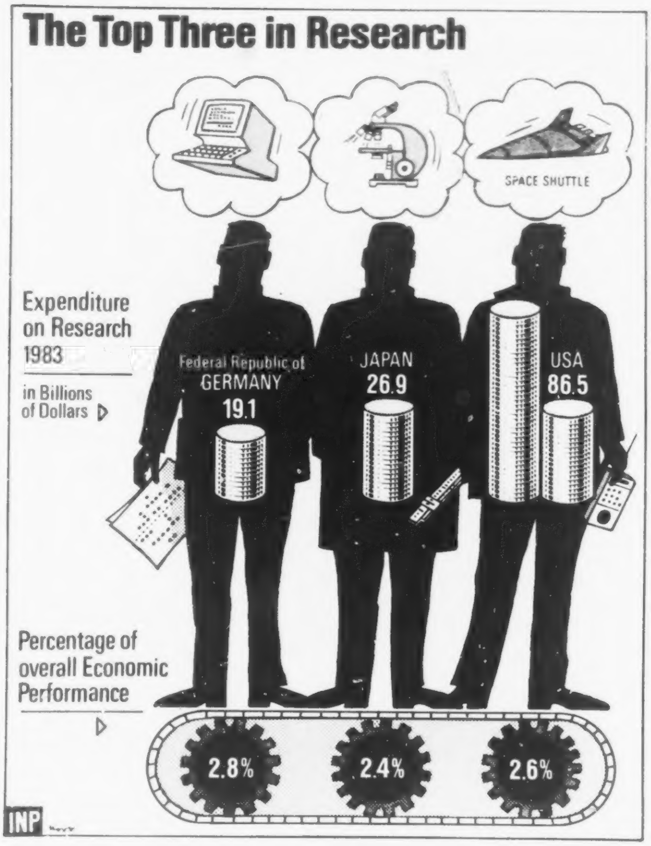
2. The discussion of German competitiveness in the high technology field has been fed with a steady flow of facts and figures over the course of time. But there are considerable variations between individual long-term analyses. That is partly due to the very different definitions of "high tech". The broader the definition is, the more favourable does the competitive position of German industry appear to be.

If competitiveness was sometimes over-estimated a few years ago, its innovative force is often under-estimated today. To speak of a "German disease" after the "British disease", as Japanese journalists often do, is in my view not tenable. German industry proved its innovative force and competitiveness in the past and will continue to do so.

If competitiveness was sometimes over-estimated a few years ago, its innovative force is often under-estimated today.

That the Federal Republic of Germany still has an excellent economic and technical capacity is clearly demonstrated by its export successes in the sophisticated US market. During the first half of 1984 German exports to the USA rose by almost 50%.

The Federal Republic of Germany has for


The Top Three in Research

years been at the top of the list in world trade with industrial goods. In 1982 it had a share of 16.7%, while the USA had 15.4% and Japan 14.7%. The German slice of the cake was as big in 1982 as in 1979, despite the advance of the Japanese and the threshold countries, an advance not solely due to the extremely high rate of the dollar. These figures would not be possible with technically outmoded production processes or unsophisticated products.

The competitiveness of an economy is the result of a number of factors such as the range of supply, unit wage cost trends, reliability on delivery dates and the quality of workmanship.

3. The high efficiency of German industry is evident not only in its high export figures but also in the highest per capita value added in manufacturing. In international comparison, it is ahead of Sweden and Japan. The high level of productivity is due to the fact that in none of the larger OECD countries are there such slight differences in productivity between

- large companies, small and medium-sized companies
- production, administration and services in industry
- consumer goods and capital goods industries

The competitiveness of an economy is the result of a number of factors such as the range of supply, unit wage cost trends, reliability on delivery dates and the quality of workmanship. All this is reflected in the current account. If one takes these factors as a whole and also takes into account all the available quantitative and qualitative data it is evident that the German economy has done well.

4. More recent OECD studies showed that German industry has a wider range to offer in technology-intensive products than Japan. With a share of about 17%, the Federal Republic of Germany is behind the USA (23%) and ahead of Japan as second largest exporter of high technology products in the OECD area. German companies are market leaders in four out of eleven of the product groups surveyed.

German industry has a wider range to offer in technology-intensive products than Japan.

The following are examples of top level technological achievements in three major industries:

In the motor industry – the anti-skid system, the air-bag safety system, the permanent four-wheel drive, electronic automatic transmission, multi-link rear suspension and the fully electronic hybrid ignition system (all these are developments which increase the active and passive safety of passengers in the car or reduce damage to the environment).

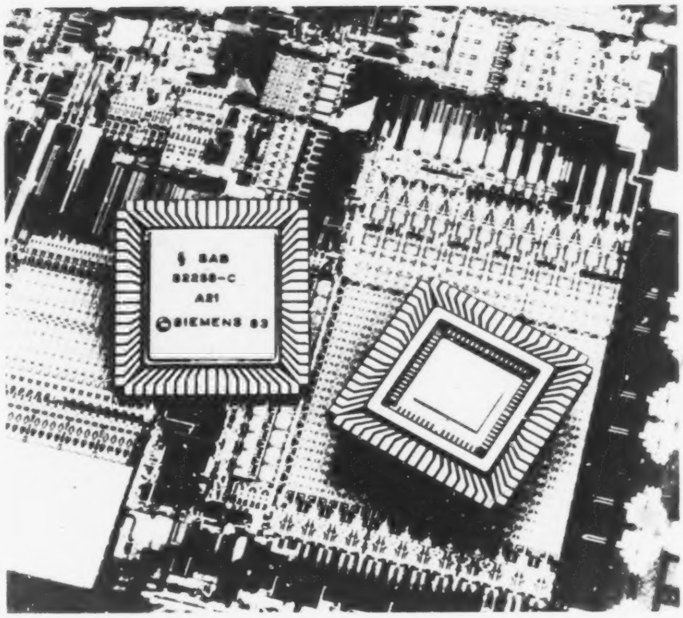
In the chemical industry – computer-assisted evolution of structural formula, the development of new tropical medicines and the use of new techniques in coal upgrading.

In electrical engineering – the development of the laser printer, the service-integrating digital communications network, the interactive videotex service, and the development of energy-saving, thyristor-controlled switches for extremely high voltage use in commercial power supplies.

German companies also have excellent prospects in maintaining a strong position in sectors where pressure from the Japanese has been felt, especially in recent times. Paper and printing machines, wood processing and mining equipment, together with flexible machine tools, are still among the top German products and are international leaders in these fields. The consistent use of microelectronics has largely contributed to developing machines with additional qualities and performance. Half of all the German mechanical engineering firms are now making and selling products with micro-electronic components, while five years ago that was the case for only every sixth firm in this sector.

It does not appear to be widely known that it was a German quartz smelting plant which created the basis on which the United States and Japan have produced cheap and reliable micro chips. The company is the only one of its kind to produce high performance, large-scale quartz reactor vessels, which not only withstand the high temperatures needed in the preparation of silicon, but remain chemically inactive during the process. Only when these conditions are met, can the polycrystalline silicon, needed by the semi-conductor industry, be produced to the necessary purity. Another young German company in Aachen is now creating the prerequisites for the economic manufacture of new and promising semi-conductor material of a gallium arsenide base.

Nor does it appear to be well known that a German company, in addition to a Swiss pharmaceutical concern, is the leading manufacturer of liquid crystal for display systems. In 1981 alone more than 180 million individual display systems were installed (mainly by the Japanese), in timepieces, measuring instruments, pocket calculators, cameras, petrol pump metres and telephones. Most of them used nematic liquid crystals made by a German firm. The success has come after years of work researching the physics and chemistry of liquid crystals.



Advanced DMA controller ADMA for 16 bit microcomputer systems. Open housing (right) shows the 48 mm² chip with ca. 52,000 transistors.

In the research labs of German companies, scientists continue searching systematically for new classes of liquid crystals with new qualities. But only every few years does the search yield a substance that is a market success.

Half of all the German mechanical engineering firms are now making and selling products with micro-electronic components, while five years ago that was the case for only every sixth firm in this sector.

German industry has also achieved considerable success in air and space technology. In the field of photo-voltaic electricity generation, with the help of solar cells, German firms are among the leaders. Several news and television satellites get their electricity supply from German solar cells. The German systems are extremely safe and reliable and well-suited for use in space. German firms also made a major contribution to the success of the space shuttle flights: a laboratory platform that can be re-used was developed by a German firm and passed its initiation test during a recent shuttle flight. In addition to the European space programme, German firms are also involved in a large number of projects to develop equipment for air and space travel. For example, ESA, the European Space Authority commissioned a German company in Ulm to make a highly sensitive infra-red detector to study the earth. The detector has 128 elements on a single chip.

German companies that previously invested high sums in research and development of special purpose high-performance lenses are also expecting considerable successes. The German industry is still pioneering in the production of precision telescopes, optical measuring and analysis equipment for use in medicine and geodesy and electronic cameras. A German company recently reported success in opto-electronics in the development of a high-performance light conductor, for the production of optical fibre cables. in which the light carrying the signals needs to be amplified, not every 20 km. but only every 100 km.

The company is the only one of its kind to produce high performance, large-scale quartz reactor vessels.

The Federal Republic of Germany can also report striking developments in engineering and environmental technology. German firms may not yet have achieved the hoped-for breakthrough in the export business in this field, but the sun and wind plant, new heating equipment, emission filters and the biological purifi-

These materials are made of very cheap basics, sand and bauxite, and they have qualities that make them emminently suitable for use in endo-prosthetics, the production of artificial limbs.

cation plant developed by groups of German firms, are among the world leaders according to the experts.

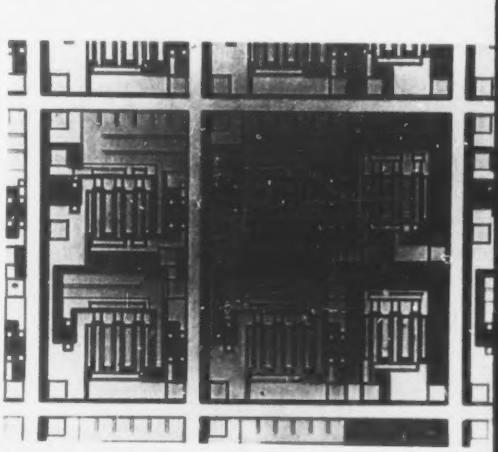
A concrete example of a production process that saves raw materials and reduces pollution, is the development of a new resin-free chipboard. The new material consists of wood chips and plaster. It is as firm as the older boards on a resin base, but it is six times less likely to warp and less inflammable, so it can be used in building construction. A major consideration is that the chipboard does not exude formaldehyde. The material is 15% cheaper to produce than the older boards and manufacturers from all over the world are applying for licenses.

We owe it to the imagination and care of German engineers and designers that the ceramic materials developed for the construction of combustion engines are now being used on a broad base in medicine. These materials are made of very cheap basics, sand and bauxite, and they have qualities that make them eminently suitable for use in endo-prosthetics, the production of artificial limbs. They have no side effects in contact with the human body, they are firm but elastic, malleable and resistant to chemical processes. Finally it should be mentioned that the nuclear power stations being built in Germany have such a high standard of safety that they have by far the lowest down-times in international comparison.

5. However, it should be mentioned that there are companies and industries in Germany, just as in other countries, that are finding it difficult to use the new technologies to achieve pioneering developments. They are inclined to stick to proven products, simply replacing mechanics with electronics, metals with ceramics and hardware with software, without widening the range of functions at the same time. All our experience to date suggests that adequate growth prospects will not come if the new technologies are only used for substitution and not addition.

A company must leave the well-trodden paths of technology and look for new fields of application where several disciplines converge.

If a company engaged in research and development wants to achieve additive effects, it must leave the well-trodden paths of technology and look for new fields of application for the new technologies in the areas where several disciplines converge. Medical technology offers striking examples of this. Only choose cooperation between medical practitioners, physicists, engineers and information experts enabled German industrial firms to develop such complex systems as the nuclear magnetic resonance tomograph for the identification of different tissue structures, which entails no physical risk to the human body; the use of energy-intensive shock waves from plasma physics to crush kidney stones, where formerly an operation was needed; or the use of the twin-dye laser beam for eye operations, which is unique throughout the world.

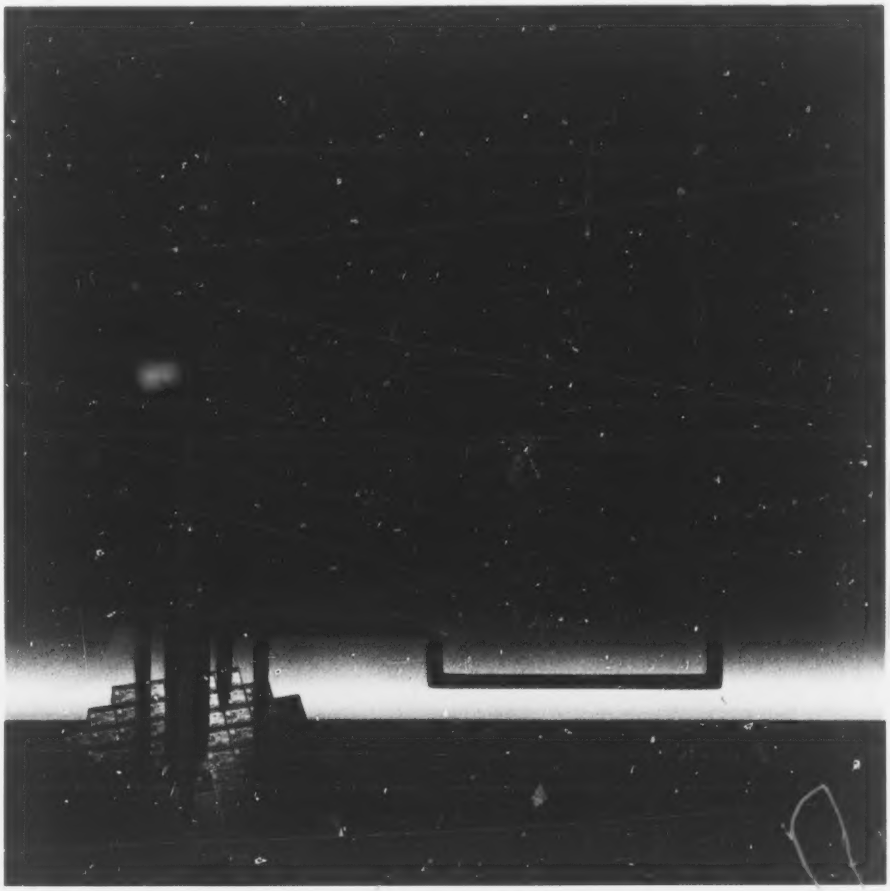


Monolithic integrated microwave chip about 1 mm per side offers high linearity as broad band antenna amplifier for T.V. signals from satellites.

Another technical breakthrough which is expected to be a great financial success was also a product of inter-disciplinary co-operation between scientists: X-ray lithography for the production of integrated electronic circuits. A Berlin group of researchers, which included scientists from publicly funded research institutes and from all the German manufacturers of semi-conductors, are using not light as before, but X-rays to etch the ultra-fine structure on to silicon chips. X-rays have a shorter wave length (and so a higher resolving power) and they enable the surface density of a circuit to be increased by more than 100 times over the present level. The constant increase in the density of structures in micro-electronics is not only improving the performance of individual circuits but also lowering costs to a degree unique in the history of technology. Over the past two years costs per unit of performance have been reduced by up to 30% per year.

The work of the Berlin group also demonstrates how unconventional ideas can help to

The future depends
on the creativity of the present.



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conquer territory that pessimists had written off for German industry.

6. As opposed to traditional technologies, the modern high technologies require close cooperation between several disciplines, physics, mathematics, informatics, optics, engineering, organic chemistry, molecular biology and genetics. The new combinations of words: optoelectronics, telematics, biotechnology and the abbreviation C³ (Triple C) for "computer, communications and components" symbolize the interplay of the various fields. Here German scientists, who often cling to traditional ideas regarding the status of individual disciplines, can learn much from the USA.

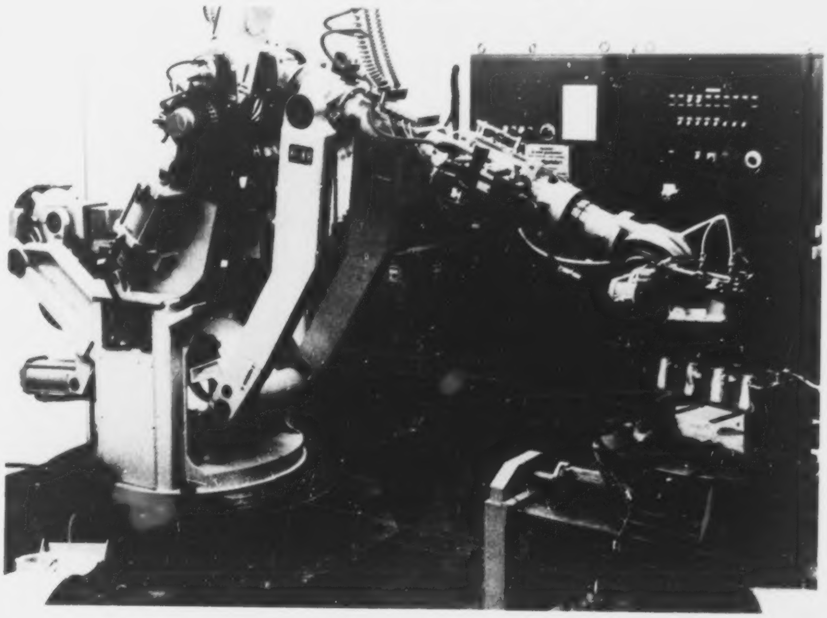
German scientists, who often cling to traditional ideas regarding the status of individual disciplines, can learn much from the USA.

Every German professor who has worked at an American university praises the excellent spirit of cooperation between scientists from different fields. The climate is also very much better in the USA between university research and industry and we should take that as our model. In the Federal Republic of Germany it was long regarded as suspect by universities and bureaucratic institutions for university research personnel to take on commissions for industry. Conversely, industry had become increasingly suspicious of universities. But this is changing. The growing cooperation between the Technical University in Berlin and Berlin's industrial firms is only one example of closer cooperation between universities and industry.

There is something else we can learn from the USA: Congress and the Administration, industry and the general public are discussing and examining the performance of the USA in top technologies openly and with great intensity. We should be equally open and objective about this in the Federal Republic of Germany. A factual analysis of the causes is a major prerequisite for learning how to do better. We should not shy away from this because of a few negative headlines in the press.

Growing cooperation between the Technical University in Berlin and Berlin's industrial firms is one example of closer cooperation between universities and industry.

The "Factory of the Future" is taking shape.



7. In terms of the amount spent on research and development, the Federal Republic of Germany, measured in percent of the gross domestic product, is at the top of the world table together with the United States with 2.6%. Still it would be possible to claim that not enough is being done to utilize existing technologies in products and industrial processes. There is also undeniably a certain back-log to be made up in the use of micro-electronics. Specialists see this as due to three factors:

- The traditional strength of German industry in precision mechanics, where adjustment at first did not seem necessary.
- The view that micro-electronics is a substitution technology, which often masked the possibilities for completely new, much wider and cost-favorable uses.
- The lack of the powerful stimulus the US micro-electronic industry had from the space and military program.

Leading industrialists today also admit that German industry has tended to be rather too defensive in strategically important fields of technology, such as the information technology, the development of new materials or genetic and biotechnology. As indicator we could take both the number of new technology-oriented businesses being founded, which is too low, and their growth, which is relatively slow and the lack of interest in sections of the population in new technical developments.

8. An assessment of the technological achievement of German industry would be incomplete without a glance at the preliminary work done

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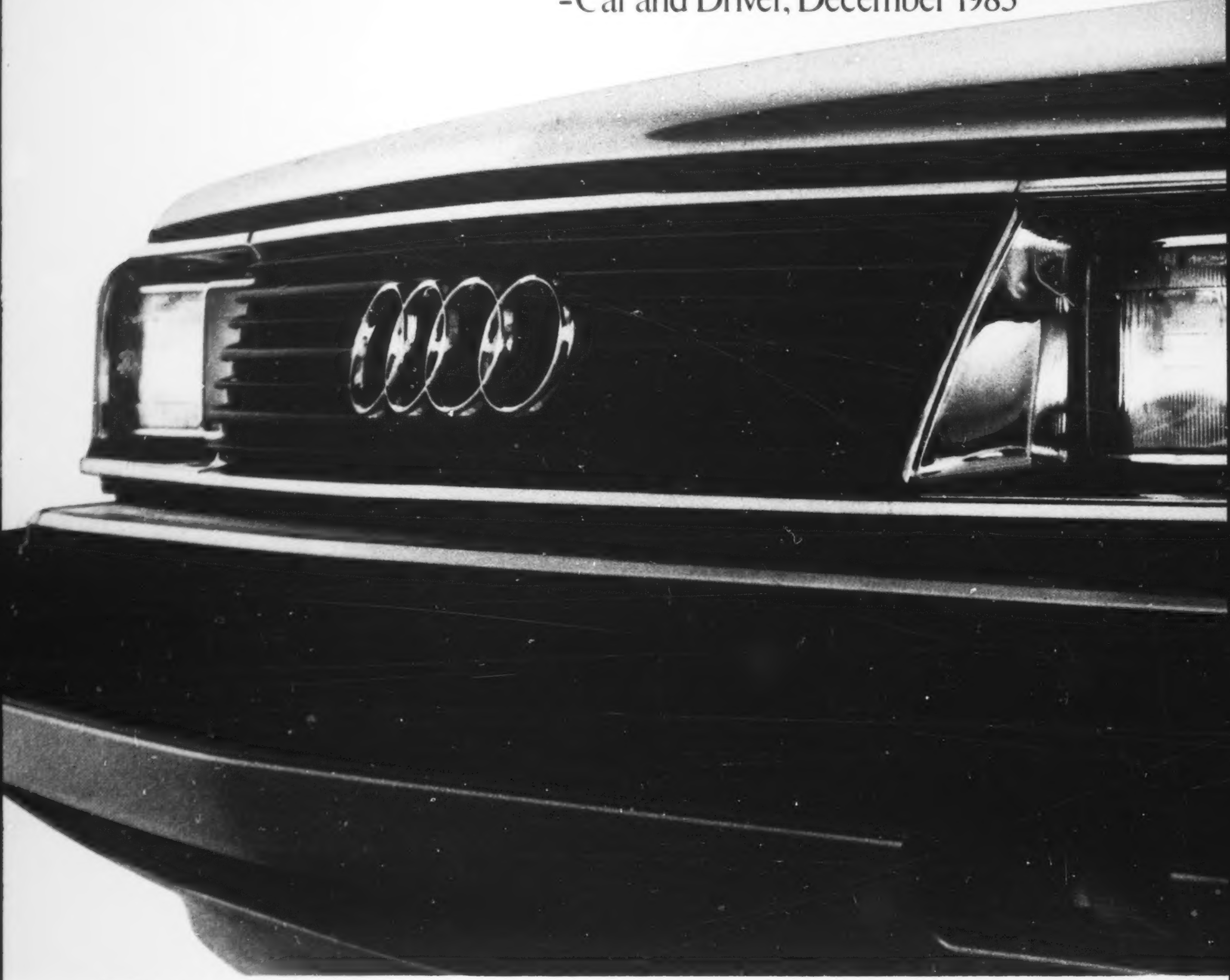
"At Audi the future of the automobile is being decided."

-Car and Driver, December 1983



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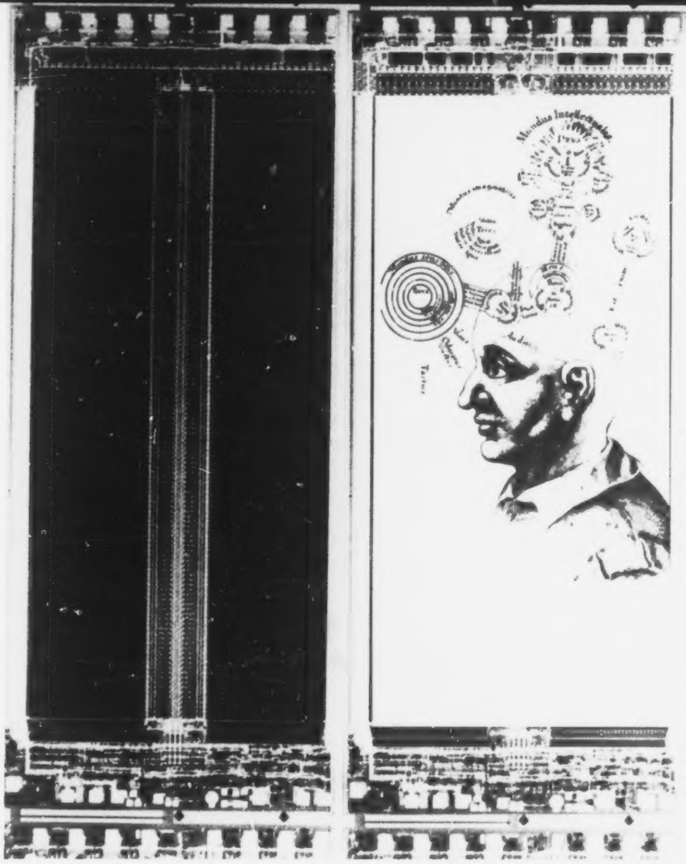

The average human brain can store about 62.5 million typewritten pages. A 256 kilobits (k) RAM stores 16 pages.

"High tech" may be important to the economy and society, but it is not the only factor that matters.

mainly in basic research and applied research by the universities and Max Planck Institutes, the Fraunhofer research institutes and the National Research Centers. Basic work done here in solid state physics, materials science, high energy and atomic physics often forms the basis for industrial developments later, provided that the transfer of scientific knowledge to industry functions properly. Here in particular we have not only had major efforts in the past, we have also had considerable success. The exchange of scientific personnel and projects carried out jointly by industry, the universities, engineering offices and technology consultants is of particular importance for a successful technology transfer.

9. In evaluating priorities in international competition in technology and industry it is easily overlooked that "high tech" may be important to the economy and society, but it is not the only factor that matters. There is no country in the world where the industrial structure of the future will consist exclusively of robots, microelectronic firms and biotechnology.

The young industries cannot provide all the growth that is needed to reduce unemployment. According to an estimate by the "Institut der deutschen Wirtschaft" four-fifths of German industry in the 90's will still consist of traditional sectors whose products will still be in demand, abroad as well as at home.

The German automotive industry is an excellent example of the ability to remain flexible in a conventional sector, and continue refining and improving its products. Extensive investment, innovations to meet market requirements and lower production costs have enabled this sector to adapt to the growing pressure on world markets and changing energy conditions. These firms have actually been able to improve their positions.

10. In regard to the development and use of complicated modern technologies, the Federal Republic of Germany has structural conditions resulting in optimism for the future. We have a highly qualified workforce, efficient and open capital markets, stable political and socio-economic conditions, a high degree of legal security and a balanced company structure with a large number of small and medium-sized companies. German industry has demonstrated its ability to combine mature technology with new technology and achieve products with a high utility value that can be further refined. The success German firms have achieved with consumer durables, such as cars and household goods, is due to this ability. These sectors have succeeded in opening and enlarging above-average growth sectors of more sophisticated demand. A second area where German industry is strong is in what is known as the "problem-solving business": high flexibility with regard to customers' wishes, comprehensive advisory services and reliable service as a package. This has been particularly successful in sales of plant and systems.

The success German firms have achieved with consumer durables, such as cars and household goods, is due to this ability.

There will be demand for these qualities in many areas of application in future as well. The integration in the communications network (the "network of the future") and the transition to communications systems in the office and factory (the "office of the future" and the "factory of the future") mean that reliability, and the ability to adapt and integrate new technologies into existing structures and systems will be of critical importance. This is where I see promising fields of activity where German companies will be able to demonstrate their "strength in combination."

11. In international comparisons, the situation in Germany may be summarized as follows:

Being at home in space requires keeping both feet on solid ground.

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Thus, "keeping both feet on solid ground" also means the evolution of helicopter rotors to wind-driven power plants, of satellite power systems to solar energy power plants and to electricity from light, of rocketry to Airbag gas generators, of defense systems technology to laser hospital equipment, and of light-weight aerospace construction techniques and materials to ultramodern rail transit systems.

These few examples demonstrate the limitless vistas and opportunities for giving problem-solving impulses to business, industry, and for the improvement of our standard of living.

That's what we mean by keeping our feet on solid ground.

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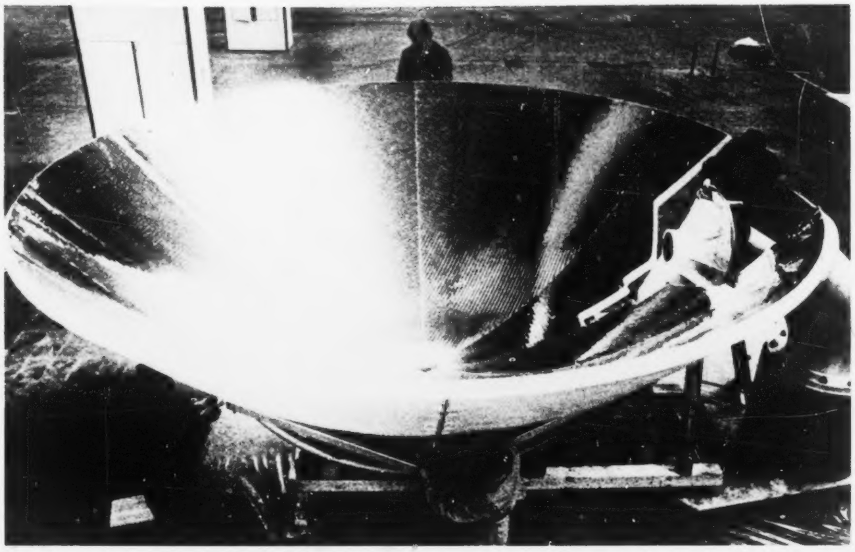

Parabolic reflector manufactured by German industry and intended for use at a solar power station in Kuwait.

In the segment of goods with a high-technology content, the German economy still holds a strong position. Intensive research and development by companies lend support to this. The traditional strength of the German export range has been maintained: "a broad range especially in capital goods of high technical standard, good capacity to adjust in solving problems, and an intelligent use of high-technology products, whether of domestic or foreign origin, right through the production range."

On the other hand, there are weaknesses which may not be overlooked. In industrial development and utilization German companies have a high technology backlog to make up in certain important areas. According to results presently available the competition situation can be categorized as: good, but the dynamic varies. It is not possible to prove that a drop in the market position for some goods would jeopardize competitiveness in the economy as a whole in the future. A country does not lose a good competitive position even if other countries sometimes gain greater market shares in certain areas.

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International competition, in an open system of world trade, consist of advance and follow-up—some fall behind and then catch up again or overtake. If the positions occupied by the Federal Republic of Germany in certain product groups, technologies or industries have developed differently, that is part of the normal structural change in an international division of labor. No country can always be at the top in every field.

12. It is evident that high-technology industries have above-average growth prospects. Micro-electronics or information technology make a considerable contribution to increasing productivity and for this reason too it is important for German industry to be near the top. What conclusion should be drawn from this for the German economy? First of all, what must economic policy avoid under present circumstances?

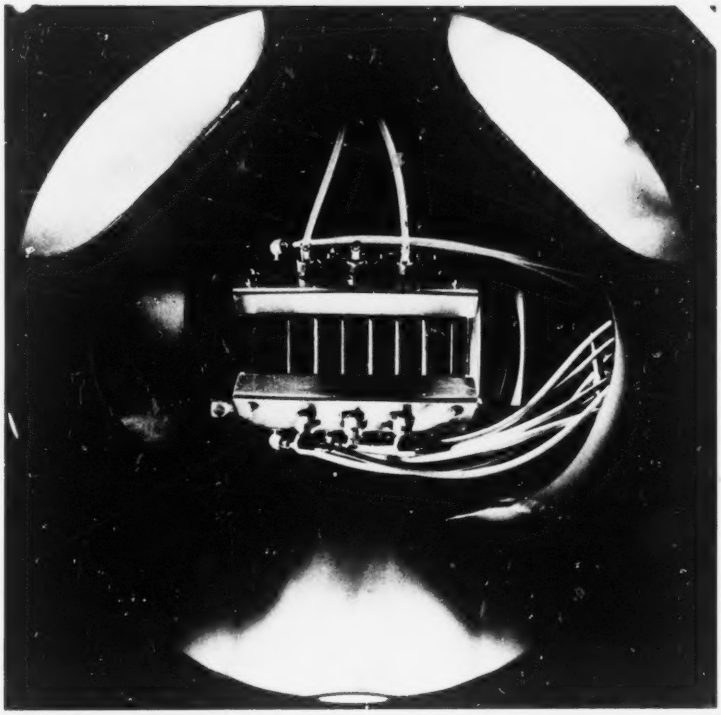
It would certainly be wrong to attempt to copy foreign systems based on other economic, social, and cultural conditions. It would not be possible to apply a foreign system to the German situation. But this does not rule out the attempt to learn from others.

It would certainly be wrong to attempt to copy foreign systems which are based on other economic, social, and cultural conditions. It would not be possible to apply a foreign system to the German situation. But this does not rule out the attempt to learn from others.

Nor can we admit protection for domestic industry from high-tech imports and certainly not subsidization of our own exports. Both would be defensive strategies which would only hold up overdue structural adjustment and ultimately make the problems worse. Moreover, they would spark off retaliatory measures from our trading partners and this would lead to chain reactions in the direction of an international subsidization and protectionist race.

With the high degree of interdependence in the world economy and the fundamental importance for economic growth of free trade throughout the world we simply cannot afford to fall back into protectionism. The current initiatives of liberalisation in the OECD and GATT are therefore extremely welcome.

The same applies to the modern variants of protection, especially the so-called self-restraint agreements. They bring a progressive bilateralization of trade and undermine the multilateral principles of GATT and its rules, especially the most-favored nation clause. But that is a crucial means of guaranteeing that all members are treated equally.



Detector leading to the identification of element 107 and of proton-radioactivity.

In the Federal Republic of Germany we need a constant flow of new investment, a higher rate of innovation (especially shorter development periods) and new forms of cooperation, such as joint research between universities or research institutions and the private sector.

13. In the Federal Republic of Germany we need a constant flow of new investment, a higher rate of innovation (especially shorter development periods), and new forms of cooperation, such as joint research between universities or research institutions and the private sector. We also need a greater readiness to take risks. The best prerequisites for this are in the free economic system. Economic policy in the Federal Republic of Germany is based on the principle of the market economy. In the high technology field as in the other sectors the signal function of competition must be maintained internationally and it must be strengthened. A functioning world economic system with free markets and without protection will guarantee the most efficient allocation of resources and the most flexible adjustment to the constantly changing conditions of the world market.

Economic policy must work to ensure a climate in which investment, which is the basis for innovation, is worthwhile. This means motivation to perform and a readiness to take risks, with deregulation and de-bureaucratization, as well as a system of taxation and contributions that encourage investment. The social partners must always bear in mind in their negotiations that an excessive cost burden for companies will weaken their international competitiveness.

Industry bears the primary responsibility for R & D.

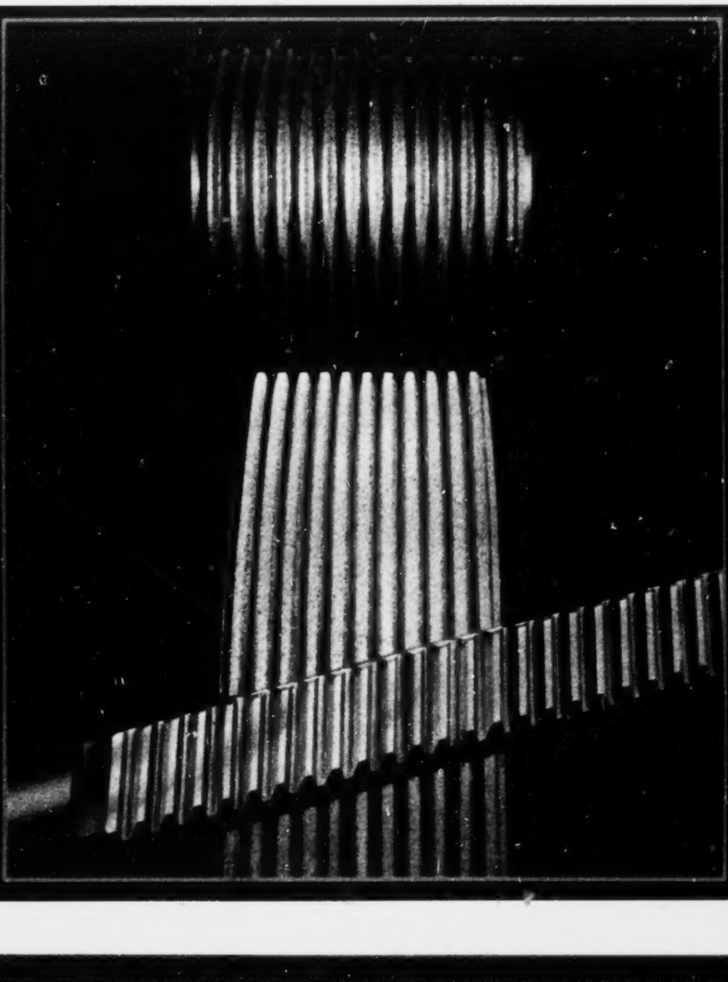
14. Regrettably, competition in the high technology field has become a competition between state promotion systems. In my view, the state promotion of high technologies should not direct the production structure in the economy into particular channels. Industry bears the primary responsibility for R & D. In promoting research, development and innovation the Federal Government gives preference to broad measures which will have a general effect. These may be special depreciation, personnel cost grants for research and development and joint industrial research. Special promotion programs should, therefore, have a time limit and if possible be degressive.

One of the main tasks of government is to set a framework of conditions to encourage innovation so that German industry can maintain a high degree of international competitiveness, including the high technologies. The main work must be done by the companies themselves in their daily input to the market and in a constant readiness to adapt to a changing environment. ■

DEUTSCHE ZUSAMMENFASSUNG

Bundeswirtschaftsminister Dr. Martin Bangemann widerspricht in seinem Beitrag entschieden der Auffassung, die Deutschen haetten mit ihren Produkten an internationaler Wettbewerbsfaehigkeit eingebuesst. Unter Hinweis auf weltweite Erfolgsprodukte deutscher Unternehmen vertritt der Minister die Ansicht, so wie frueher die Wettbewerbsfaehigkeit der deutschen Industrie gelegentlich ueberschaetzt worden sei, so werde heute ihre Innovationskraft haeufig unterbewertet.

Nach neuen OECD-Untersuchungen verfuege die deutsche Industrie bei den technologieintensiven Produkten ueber eine groessere Angebotsbreite als beispielsweise die japanische Wirtschaft, betont Bangemann. Nach den USA (23%) sei die Bundesrepublik Deutschland mit einem Anteil von 17% der zweitgroesste Exporteur von Hochtechnologieprodukten im OECD-Raum. Bei vier von elf untersuchten Warengruppen seien die Unternehmen aus der Bundesrepublik Marktfuehrer gewesen. Als Beispiele fuer deutsche Spitzenleistungen fuehrt Bangemann vor allem verschiedene Produkte aus den drei grossen Wirtschaftsbereichen Automobilindustrie, Chemische Industrie und Elektrotechnik an. Er nennt in diesem Zusammenhang u.a. das Antiblockiersystem fuer Autos, neue Medikamente fuer die Tropenmedizin, die Kohleveredelung und die Entwicklung des Laserdruckers. Wie Bangemann hervorhebt, steht die Bundesrepublik im gesamten Welthandel mit Industriegueteern heute unveraendert an erster Stelle. Dies sei sicherlich nicht allein auf den extrem hohen US-Dollarkurs zurueckzufuehren. Mit technisch rueckstaendigen Fertigungsverfahren und wenig anspruchsvollen Produkten — so Bangemann — waere das sicherlich nicht zu schaffen gewesen. Auch die deutsche Industrie selbst sieht sich nach den Worten des Ministers keineswegs im Nachteil zu ihren internationalen Mitbewerbern. Eine Befragung des Deutschen Industrie- und Handelstages (DIHT) bei insgesamt 14.000 Unternehmen in der Bundesrepublik habe ergeben, dass nicht einmal 10% der befragten Firmen der Meinung seien, ihre Branche habe einen technologischen Rueckstand gegenueber



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Bangemann verweist in diesem Zusammenhang auch auf die in der ersten Jahreshaelfte 1984 um fast 50% gestiegenen deutschen Exporte in die USA. Diese Exporterfolge auf dem anspruchsvollen amerikanischen Markt belegten eindrucksvoll die nach wie vor wirtschaftliche und technische Leistungsfaehigkeit der Bundesrepublik.

Der Minister raeumt allerdings ein, dass die deutsche Wissenschaft von den USA noch vieles lernen koenne, was die enge Zusammenarbeit der Disziplin im Hochtechnologiesektor und das Zusammenspiel zwischen Hochschulforschung und Industrie anbelange. Auch die nuechterne und offene amerikanische Diskussion ueber die tatsaechliche Leistungsfaehigkeit des Landes im Bereich der Spitzentechnologie koenne fuer die Bundesrepublik ein gutes Lehrbeispiel sein. Ein Land buesse seine gesamtwirtschaftliche gute Wettbewerbsposition nicht dadurch ein, dass in einzelnen Bereichen einmal andere Laender groessere Marktanteilgewinne haetten. Internationale Wettbewerbsfaehigkeit in einem offenen Welthandelssystem bestehe aus “Vorstoss und Verfolgung, Zurueckfallen und Auf- bzw. Ueberholen.” Ausdruecklich wendet sich der Minister gegen Protektion der heimischen Industrie vor Hi-Tech-Importen oder gar eine Subventionierung der eigenen Exporte. Solche Defensivstrategien wuerden die ueberfaelligen Strukturanpassungen nur aufstauen und zu internationalen Kettenreaktionen fuehren. Aehnlich zu beurteilen seien auch die “modernen Varianten der Protektion,” wie vor allem sogenannte Selbstbeschraenkungsabkommen.

Zusammenfassend umreisst Minister Bangemann die deutsche Position im internationalen Rahmen woertlich wie folgt:

“Bei Guetern mit hohem technischen Gehalt hat die deutsche Wirtschaft nach wie vor eine starke Position. Intensive eigene Forschung und Entwicklung sollen diese abstuetzen. Die traditionelle Staerke des deutschen Exportsortiments scheint nach wie vor gegeben: Grosse Breite des Angebots, besonders bei Investitionsguetern mit hohem technischem Niveau, gute Anpassungsfaehigkeit bei Problemloesungen, “intelligenter” Einsatz von Hochtechnologieprodukten, gleich ob heimischer oder fremder Herkunft, in der ganzen Breite der Produktion.

Andererseits sind einige vorhandene Schwaechen nicht zu uebersehen. Bei der industriellen Entwicklung und Nutzung muessen deutsche Unternehmen in einzelnen wichtigen Bereichen mit hoher Technologie Rueckstaende wettmachen. Nach den vorliegenden Erkenntnissen ist die Wettbewerbslage in die Formel zu fassen: Die Situation ist gut, die Dynamik ist aber differenziert zu beurteilen. Der Nachweis, dass bei einem Nachlassen der Marktposition bei einzelnen Prokukten die Wettbewerbsfaehigkeit der Gesamtwirtschaft in der Zukunft gefaehrdet sei, ist nicht moeglich...

...Wenn sich die Stellung der deutschen Wirtschaft bei einzelnen Produktgruppen, Technologien oder Branchen unterschiedlich entwickelt hat, so ist das auch Ausdruck des normalen strukturellen Wandels in einer internationalen Arbeitsteilung. Kein Land kann auf Dauer in allen Bereichen fuehrend sein.

Hochtechnologiebranchen haben offensichtlich ueberdurchschnittlich guenstige Wachstumsaussichten. Mikroelektronik, Informationstechnik u.a. tragen wesentlich zur Produktivitaetssteigerung bei. Aus diesen Gruenden ist es auch fuer die deutsche Wirtschaft wichtig, mit an der Spitze zu sein. Welche Schlussfolgerungen ergeben sich hieraus fuer die Wirtschaftspolitik? Zunaechst eine Negativabgrenzung. Was darf die Wirtschaftspolitik unter den gegebenen Umstaenden nicht tun?

Sicher kann es nicht darum gehen, eine Kopie fremder Systeme zu versuchen, die durch andere wirtschaftliche, soziale und kulturelle Voraussetzungen gepraegt sind. Eine Uebertragung auf deutsche Verhaeltnisse waere praktisch nicht moeglich. Das schliesst nicht aus, dass man versucht, von anderen zu lernen....

...Angesichts des hohen Interdependenzgrads der heutigen Weltwirtschaft und der fundamentalen Bedeutung des freien Welthandels als Schwungrad fuer das Wachstum der Volkswirtschaften koennen wir uns einen Rueckfall in den Protektionismus einfach nicht leisten. Die aktuellen Liberalisierungsinitiativen in OECD und GATT sind deshalb nachdruecklich zu begruessen.

Aehnlich zu beurteilen sind auch die “modernen Varianten der Protektion,” vor allem in Form sog. Selbstbeschraenkungsabkommen. Sie fuehren zu einer zunehmenden Bilateralisierung des Handels und untergraben die Multilateralitaet des GATT und dessen Regeln, besonders die Meistbeguenstigungsklausel. Letztere ist aber der entscheidende Schutz fuer die Gleichbehandlung aller Mitglieder.

Wir brauchen in der Bundesrepublik Deutschland staendig mehr Investitionen, eine hoehere Innovationsrate (insbesondere durch Verkuerzung der Entwicklungszeiten), neue Kooperationsformen wie z.B. die sogenannte Verbundforschung von wissenschaftlichen Instituten und privaten Unternehmen und eine groessere Risikobereitschaft. Die besten Voraussetzungen dafuer sind in freiheitlichen Wirtschaftssystemen gegeben. Die Wirtschaftspolitik in der Bundesrepublik Deutschland beruht auf den Prinzipien der Marktwirtschaft. Im Hochtechnologiebereich muss ebenso wie in den uebrigen Sektoren international die Signalfunktion des Wettbewerbs erhalten bleiben und gestaerkt werden. Ein funktionierendes Weltwirtschaftssystem mit freien Maerkten ohne Protektion garantiert die effizienteste Allokation von Ressourcen und die flexibelste Anpassung an die sich staendig wandelnden Daten des Weltmarktes.

Die Wirtschaftspolitik muss fuer ein Klima sorgen, in dem sich Investitionen, die Traeger der Innovationen sind, besser lohnen. Dazu gehoeren Leistungsmotivation und Risikobereitschaft ebenso wie Deregulierung oder Entbuerokratisierung sowie ein investitionsfreundliches Steuer- und Abgabensystem. Die Tarifpartner muessen bei ihren Verhandlungen stets im Auge behalten, dass uebermaessige Kostenbelastungen der Unternehmen deren internationale Wettbewerbsfaehigkeit schwaechen.

Leider ist der Wettbewerb im Hochtechnologiebereich in einem bisher unbekannten Masse zu einem Wettbewerb zwischen staatlichen Foerdersystemen geworden. Bei der staatlichen Foerderung von Hochtechnologien darf nach meiner Auffassung nicht versucht werden, die Produktionsstruktur der Wirtschaft in bestimmte Bahnen zu lenken. FuE-Politik hat sich im Verhaeltnis zur Wirtschaft am Grundsatz der Subsidiaritaet zu orientieren.

Die Bundesregierung gibt deshalb bei ihrer Foerderung von Forschung, Entwicklung und Innovation breit ansetzenden, allgemein wirkenden Foerdermassnahmen, wie z.B. Sonderabschreibungen, Personalkostenzuschuessen fuer Forschung und Entwicklung oder der industriellen Gemeinschaftsforschung, den Vorzug vor selektiver Foerderung. Besondere Foerderungsprogramme sollten zeitlich befristet und nach Moeglichkeit degressiv sein.

Wesentliche Aufgabe des Staates ist es, innovationsfoerdernde Rahmenbedingungen zu setzen, in der sich ein hoher internationaler Wettbewerbsstand der deutschen Wirtschaft — auch im Bereich der Hochtechnologien — entfalten kann. Die wichtigste Aufgabe faellt der Wirtschaft beim taeglichen Einsatz am Markt und bei der permanenten Bereitschaft zur Anpassung an ein veraendertes Umfeld selbst zu.”

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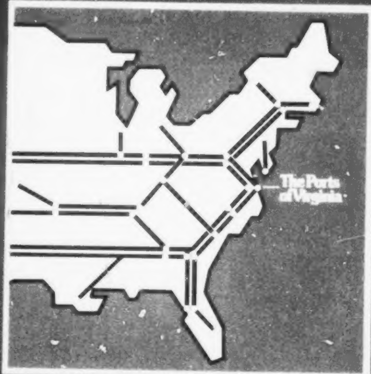

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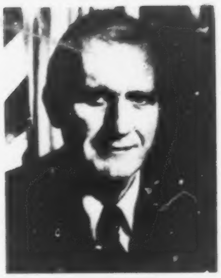
Die Rolle des Venture Capital in einem hochtechnisierten Zeitalter

Venture Capital in the High-Tech Age



by Malcolm Baldrige
United States Secretary
of Commerce

Capital and labor must adapt to the new demands placed on them by rapid shifts in high-technology markets.

Economies worldwide are undergoing a profound change as an explosion of high-technology products and processes provide increasing opportunities for economic growth, prosperity, and employment. Associated with these changes has come the realization that capital and labor markets must adapt to the new demands placed on them by rapid shifts in high-technology markets. Both private and public sectors in many nations have developed innovative ways of meeting the requirements for technological advancement.

In the United States, one of the most important factors contributing to the success of high-tech firms has been the availability of sufficient venture capital to finance the continuously increasing needs of research and product development. Venture capital can also play a significant role in Europe, provided that other prerequisites for a favorable high-technology environment exist.

The Rise of the Venture Capital Industry

President Reagan's economic policies have brought a recovery in the United States that since the end of 1982 has seen a net increase of 6.6 million jobs and has reduced unemployment from 10.7 percent to 7.4 percent. In 1983, new business incorporations reached a record 602,000.

The ability of the United States to achieve this employment growth in the face of high real interest rates and a strong currency can be attributed, at least in part, to the vitality of U.S. high-technology industries.

At a time when industrialized nations are experiencing increased international competition in traditional sectors, high-technology industries, especially small and medium-sized firms, have been a source of innovation, increased productivity, and employment. A study conducted by the Massachusetts Institute of Technology showed that firms employing under 500 workers created more than 86 percent of all new jobs in the United States between 1969 and 1979. Perhaps even more important than the employment created by high-technology companies themselves is the increased productivity in more traditional sectors resulting from technological innovation.

Over the last five years, the amount of available venture capital in the United States has expanded dramatically. The total in 1983 (aggregate investments and committed funds) reached $12.1 billion, of which approximately $2.5 bil-

Over the last five years, the amount of available venture capital in the United States has expanded dramatically.

lion was committed to new investments. This compares with a total venture capital pool of $7.6 billion in 1982, and only $3 billion in 1977.

Venture capital still remains a relatively small segment of the total U.S. financial market, probably accounting for less than 2 percent of the value of U.S. equity outstanding. Evidence has shown, however, that the effect of venture investments on technological innovation and economic growth far exceeds the size of its dollar value.

A 1982 General Accounting Office study, for example, found that $209 million of venture capital successfully invested in 72 firms in the 1970's resulted in: (1) an estimated 130,000 jobs; (2) over $100 million in corporate tax revenues; (3) $350 million in employee tax revenues; and (4) $900 million in export sales. That same study estimated that for each $1,000 of venture capital investment during the 1970's, an estimated $40,000 to $54,000 worth of goods and services designed to increase productivity will be sold during the 1980's.

The recent increase in the amount of capital devoted to venture financing, and the well-publicized successes of venture capital-backed high-technology companies may obscure the fact that venture financing is not a particularly new development. In fact, many of the early industrial innovations in the United States were financed by investors who were willing to take risks on new inventions. Nor is venture capital limited to high-tech industries. For example, in 1981 and 1982 about one-third of U.S. capital investments related to non-high-tech enterprises. These investments were made in health and consumer-related fields, energy, industrial products or other miscellaneous industries.

However, for several reasons, venture capital financing is particularly well-suited to today's growing number of small, innovative, high-tech companies, which are extremely capital-intensive and require continuous funding to sustain high growth rates. First, venture capital is "patient capital"; usually, investors are prepared to wait up to five years for any return. This is essential for a small firm trying to manufacture and market a new product; in such cases, earnings must be retained, and preferably interest and dividends should not be paid.

First, venture capital is "patient capital"; usually, investors are prepared to wait up to five years for any return.

Second, venture capital almost always involves some type of equity participation in a company, either through stock warrants or convertible securities. Small start-up firms must rely more heavily on external equity than do larger, more established firms.

Third, venture capitalists typically provide personal value added, what is sometimes referred to as "hands-on" management. Often, entrepreneurs in start-up, high-technology companies may have excellent technical backgrounds, but need assistance in finance, marketing, and organization. Because of their direct involvement, venture capitalists in the United States usually invest locally. So it is not surprising that two of the most important centers for high-tech venture capital are in California's Silicon Valley and the Boston area, where many new high-tech companies are concentrated.

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Government Policies Toward High-Technology

Given the importance of high-technology industries, it is understandable that there is considerable interest in the nature of venture capital in the United States, and possible ways to create a healthy venture capital industry in other countries.

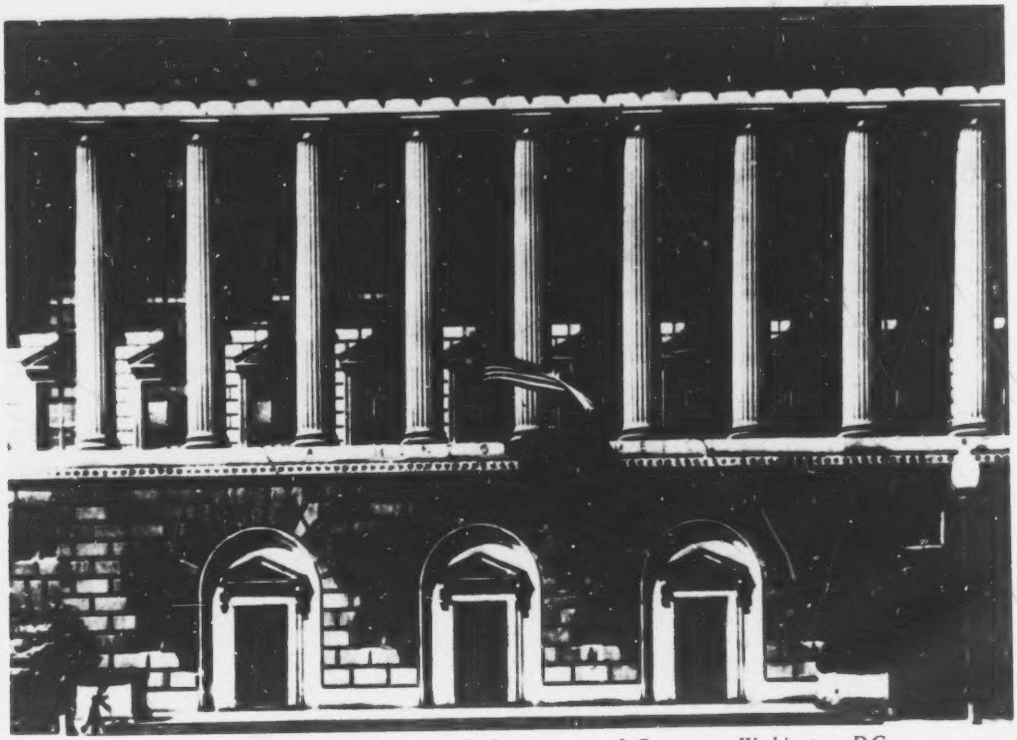
Government should not become directly involved in promoting high-technology industries. Instead, it should rely on the free market system to make the decisions as to which industries can best succeed. The government's role should be limited to creating the overall economic conditions which allow entrepreneurship to flourish.

These conditions include favorable tax and regulatory policies toward investment and R&D spending, an active public stock exchange, and an international trading system for high-tech goods and services that is as open as possible.

High-technology industries, more than any other sector, need access to world markets.

This last condition is especially critical. High-technology industries, more than any other sector, need access to world markets to provide the economies of scale, sales volume and earnings necessary to support continuing capital investments and research.

Thus, while the U.S. government has not supported specific industries, it has taken several steps to improve the fiscal and regulatory environment for high-technology. Beginning in the late 1970's, as a number of new technological developments became ready for commercialization, several tax and regulatory changes were instituted which contributed to a more favorable and flexible economic environment for venture capital.



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The most important change was the successive lowering, in 1978 and 1981, of the tax on capital gains.

Perhaps the most important change was the successive lowering, in 1978 and 1981, of the tax on capital gains, from a high of 49.1 percent to its current maximum level of 20 percent. This favorable tax treatment was effective in creating greater incentives for investment in general and venture capital in particular.

In addition, a revision in the law to allow pension funds to be invested in risk ventures, and certain other regulatory changes, allowed investors access to growing pools of capital. Also in 1981, Congress enacted the Incentive Stock Option Law, which reinstated the employee stock option as an incentive for entrepreneurship. The use of stock options by U.S. companies has been instrumental in attracting qualified management to new start-up firms.

The Commerce Department has been active in supporting Administration efforts to enable high-technology industries to use their resources to the maximum. One of the most important has been the Administration initiative to change the U.S. antitrust law to encourage new arrangements for joint research among firms. The Joint Research and Development Act, which went into effect on October 11, 1984, protects qualifying R&D ventures against treble damage liability. It also offers a more secure environment for cooperation and encourages the efficient use of scarce scientific and technical resources. It recognizes a "rule of reason" in assessing the anti-competitive implications of joint research and development to take into account the effect on competition of *not* undertaking a joint venture.

In addition, Commerce has been active in promoting R&D Limited Partnerships as a vehicle for tapping new sources of R&D funding. The Partnerships are becoming an important method of financing, especially for start-up firms. They enable companies to attract the substantial funds needed for research and early-stage product development, before venture capital investments normally step in. Since 1978, at least $2.3 billion has been invested in R&D Limited Partnerships, greatly stimulating new products and process development.

The increasing popularity of R&D Limited Partnerships demonstrates that the process of financing innovation, from idea to product development to commercialization, is a rapidly evolving one. New mechanisms and sources of funding are constantly being created. While venture capital is one source, it may not be suitable or available for every stage of the innovation cycle. The existence of a wide variety of other types of funding, such as R&D Limited

New mechanisms and sources of funding are constantly being created.

Partnerships, cooperative agreements between large corporations and new start-up companies, and credit financing, ensure expanded opportunities for worthy products and processes to be developed.

The European Environment for Venture Capital

The importance of venture capital to high-technology industries is receiving a great deal of attention in West Germany, as well as other European countries. Although the venture capital industry in Europe is not as well-developed as in the United States, it is clear that tremendous potential exists. Germany alone has 3.5 million private investors, the third largest number in the West, and European investors have for some time participated in U.S. venture capital activities.

. . .a number of institutional, fiscal, and cultural factors present obstacles to the formation of a healthy venture capital industry in Europe.

However, a number of institutional, fiscal, and cultural factors present obstacles to the formation of a healthy venture capital industry in Europe.

One obstacle is the relatively low level of activity of European stock exchanges in new public offerings. In contrast, the United States has strong over-the-counter markets for such offerings. This is critical to the development of a venture capital industry, since venture capitalists can best realize their gains by going public. It is this expectation of substantial financial rewards that increases the willingness of investors and entrepreneurs to take risks. In general, West German and European financial systems are based more on credit than equity financing. This may not be as conducive to venture capital investment.

A second obstacle is the fragmented legal and institutional framework between European countries. In addition to limiting investment opportunities, this fragmentation hinders the use of syndicated financing, which increases the financial resources of investors. Such financing also helps to overcome geographical inconveniences and allows venture capitalists to share expertise.

This fragmentation is an element in what is perhaps the principal obstacle to Europe's technological advancement: its failure to create a true common market by eliminating artificial barriers to intra-European trade. These barriers include national standards, regulatory policies, and other non-tariff barriers. This failure to integrate has hindered European industries from taking advantage of the economies of scale and seed money which are crucial to the development of high-technology products and processes.

. . .failure to integrate has hindered European industries from taking advantage of the economies of scale and seed money.

There seems to be a growing awareness among Europeans that the harmonization of the EC's internal market is necessary for the successful development of high-technology industries, and some progress has been made. The United States encourages these positive steps, because we believe that a growing high-technology capability in Europe will strengthen our alliance both politically and economically.

Prerequisites to the Success of High-Technology Industries

While it is clear that venture capital has played a significant role in the success of emerging small and medium-sized high-technology companies in the United States, it is not the only story. The success of these companies can be attributed to a wide variety of factors relating to the American business culture, which is based on a traditional mobility of people, ideas and capital.

By far the most significant of these factors is what can only be described as an entrepreneurial spirit which allows investors and entrepreneurs to take big risks for the promise of financial rewards that can be enormous. It is the quality and experience of these entrepreneurs, who often come from leading technology-based companies, that have contributed most to the success of U.S. high-technology firms.

A key element in encouraging entrepreneurship and risk-taking is the absence of a social stigma attached to business failure.

Another factor which encourages risk-taking relates to attitudes toward business failure. Although a relatively small number of venture-backed, high-technology companies fail, it is important to note that American attitudes toward business failures are rather pragmatic. This allows entrepreneurs to try again and again in order to achieve success. This attitude

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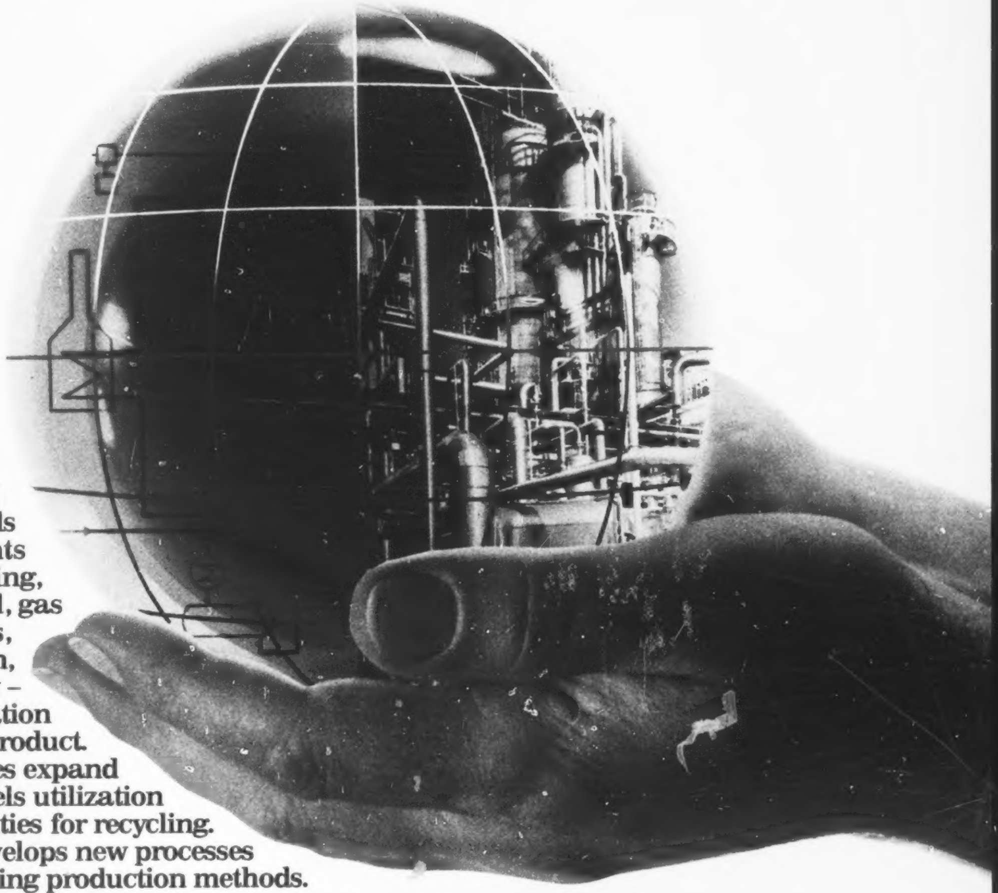

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is decidedly different in most European countries. A key element in encouraging entrepreneurship and risk-taking is the absence of a social stigma attached to business failure.

A close connection between university scientists and industry is much less common in Europe.

A close relationship between industry and research universities is also an important element in the success of high-technology firms. This relationship frequently results in university scientists working as consultants to industry, and industry providing resources to students. It has been instrumental in successful product development and marketing of commercial products which result from technological inventions. A close connection between university scientists and industry is much less common in Europe, where scientific talent is high, but where inventions are often an end in themselves and do not necessarily lead to commercialization.

In the coming decades, high-technology industries will continue to be one of the critical factors of economic growth and competitiveness. Experience in the United States has shown that venture capital can be particularly useful in financing emerging high-technology companies. In seeking to encourage similar developments in Europe, however, governments must take steps to overcome the numerous obstacles to entrepreneurship, both institutional and cultural, that presently exist. We believe that this goal can best be realized within the context of a unified European economy which will allow for the free mobility of people, goods and ideas on which technological innovation depends. ■

DEUTSCHE ZUSAMMENFASSUNG

Minister Baldrige schreibt u.a.:

Auf den Finanzmaerkten vollzieht sich ein tiefgreifender Wandel. Bedingt durch die rapide Entwicklung der high-tech Industrien bieten sich neue Moeglichkeiten fuer ein erhoehtes Wirtschaftswachstum, groesseren Wohlstand und Beschaeftigung. Dieser Entwicklung auf dem high-tech Sektor muessen die Kapital- und Arbeitsmaerkte Rechnung tragen.

Venture Capital (Risikokapital) ist einer der wichtigsten Faktoren fuer den Erfolg der amerikanischen high-tech Industrien. Es dient als Finanzierungsmittel fuer den gestiegenen Forschungs- und Entwicklungsbedarf.

Die Vitalitaet der amerikanischen high-tech Industrien hat auch massgeblich dazu beigetragen, dass die US-Arbeitslosenquote von 10,7% Ende 1982, trotz hoher Zinsen und des Dollarkurses, auf 7,4% gesunken ist. An dieser Entwicklung waren insbesondere innovative kleine und mittlere Unternehmen beteiligt: diese haben 86% der im Zeitraum 1969 bis 1979 neu entstandenen Arbeitsplaetze geschaffen. Wichtiger noch als die Schaffung neuer Arbeitsplaetze ist die durch den technologischen Fortschritt gesteigerte Produktivitaet.

Das auf den amerikanischen Finanzmaerkten zur Verfuegung stehende Volumen von Venture Capital ist sehr stark im Wachsen begriffen. Waehrend es im Jahre 1977 nur ungefaehr 3 Milliarden Dollar ausmachte, betrug es 1982 schon 7,6 Milliarden Dollar und im Jahre 1983 12,1 Milliarden Dollar, wovon 2,5 Milliarden Dollar fuer Neuinvestitionen zur Verfuegung standen. Obwohl Venture Capital verglichen mit den auf den amerikanischen Finanzmaerkten zur Verfuegung stehenden Finanzierungsmitteln weniger als 2% ausmacht, ist seine Bedeutung, wie juengste Untersuchungen gezeigt haben, groesser als es diese Quote vermuten liesse.

Venture Capital ist weder eine neue Erscheinung noch ist es auf high-tech Unternehmen beschraenkt. Es eignet sich aber in hervorragender Weise fuer die wachsende Zahl der kleineren und mittleren innovativen high-tech Firmen, die einen sehr hohen Kapitalbedarf haben. Venture Capital ist "geduldiges Kapital": Die Investoren sind in der Regel bereit, fuenf oder mehr Jahre auf eine Verzinsung zu warten und ermoeglichen es dem Unternehmen, die Gewinne zu reinvestieren. Venture Capital ist zudem in den meisten Faellen mit einer Form von Beteiligung verbunden, was besonders den neugegruendeten Firmen zugute kommt, die staerker als dies bei etablierten Unternehmen der Fall ist von Fremdfinanzierungen abhaengig sind. Schliesslich sind Venture-Finanziers auch eher bereit, ihrem Unternehmen ihre Managementerfahrungen und technischen Faehigkeiten zur Verfuegung zu stellen. Die Venture Capital-Finanziers investieren deshalb in der Regel in der Region, in der sie ansaessig sind, was den Erfolg der high-tech Industrien in Silicon Valley und in der Region von Boston erklaert.

Trotz der volkswirtschaftlichen Bedeutung sollte die Regierung davon Abstand nehmen, diesen Industriezweig direkt zu foerdern. Sie sollte sich vielmehr darauf beschraenken, guenstige wirtschaftliche Rahmenbedingungen zu setzen, innerhalb derer sich die unternehmerische Initiative frei entfalten kann. Zu diesen wichtigen Rahmenbedingungen zaehlt das Steuer- und Verwaltungsrecht, das derartige Investitionen beguenstigen soll, ein reger Boersenhandel, ein liberales Weltwirtschaftssystem, das den Austausch von high-tech Guetern soweit wie moeglich erlaubt. Dieser letztere Umstand gewaehrleistet eine groessenordnungsmaessig guenstige Produktion, hohe Verkaufszahlen und letztendlich Gewinne, die wiederum in den Forschungs- und Entwicklungsbereich einfliessen.

Die amerikanische Regierung hat seit Ende der siebziger Jahre insbesondere auf dem

Steuersektor guenstige Rahmenbedingungen fuer die high-tech Industrien geschaffen. Die wichtigste Aenderung bestand in der stufenweisen Senkung der Steuer fuer Kapitalgewinne (capital gains) von einem Maximalsteuersatz von 49,1% auf den gegenwaertigen Hoechststeuersatz von 20%.

Eine Reihe von verwaltungsrechlichen Erleichterungen wurde geschaffen. So duerfen sich beispielsweise Pensionskassen an Venture Capital-Unternehmen beteiligen. Schliesslich foerdert das vom amerikanischen Kongress im Jahre 1981 erlassene Incentive Stock Option Law die Ausgabe von Arbeitnehmeraktien und dient als Anreiz fuer Investitionen und unternehmerische Beteiligung von der Arbeitnehmerseite.

Das Commerce Department unterstuetzt die high-tech Unternehmen in ihren Bemuehungen, ihre Ressourcen optimal auszunutzen. Auf Initiative des Department of Commerce wurde der Joint Research and Development Act erlassen. Dieses Gesetz, das am 11. Oktober 1984 in Kraft getreten ist, beguenstigt gemeinsame Forschungs- und Entwicklungsprojekte und schuetzt sie vor kartellrechtlichen Angriffen. Das Department of Commerce unterstuetzt darueber hinaus die Gruendung von Personengesellschaften (limited partnerships) in den Bereichen von Forschung und Entwicklung. Diese Personengesellschaften, die seit 1978 mindestens 3,2 Milliarden Dollar investiert haben, uebernehmen eine wichtige Vorreiteraufgabe im Finanzierungsbereich.

Die europaeische Venture Capital-Industrie ist nicht so entwickelt wie die amerikanische. In Europa und insbesondere in Deutschland ist jedoch ein sehr grosses, noch unerschlossenes Potential vorhanden. Einer kraeftigen Entwicklung der europaeischen Venture Capital-Industrie stehen jedoch eine Reihe institutioneller, fiskalischer und kultureller Hindernisse im Wege.

Eines der Hindernisse liegt in dem Umstand begruendet, dass es in Europa nur relativ wenige Boersenneuzulassungen zu verzeichnen gibt. Eine zweite Huerde, die einer rapiden Entwicklung der europaeischen Venture Capital-Industrie entgegensteht, ist die Ungleichheit und Zersplitterung der europaeischen Rechts- und Finanzordnungen. Schliesslich leiden die europaeischen Industrien unter dem Mangel der wirtschaftlichen Integration. Es scheint den Europaeern jedoch bewusst zu werden, dass die Harmonisierung der nationalen Maerkte eine wichtige Voraussetzung fuer eine positive Entwicklung der high-tech Industrien ist. Einige Schritte in Richtung auf eine Vereinheitlichung sind schon gemacht worden. Das wird von den Vereinigten Staaten unterstuetzt. Denn die Vereinigten Staaten sind davon ueberzeugt, dass das Wachstum der europaeischen high-technology Faehigkeiten die Allianz zwischen den Vereinigten Staaten und Europa sowohl in wirtschaftlicher als auch in politischer Hinsicht staerken wird.

Notwendig sind ferner eine Staerkung des unternehmerischen Geistes, insbesondere der unternehmerischen Risikobereitschaft, und damit einhergehend der Abbau und schliesslich die Beseitigung des Stigmas, das in Europa immer noch mit einem Scheitern verknuepft ist; eine enge Verbindung zwischen Wirtschaft und Wissenschaft, mit dem Ziel, wissenschaftliche Erkenntnisse wirtschaftlich nutzbar zu machen. Wir sind der Ueberzeugung, dass dieses Ziel am besten im Rahmen einer europaeischen Wirtschaftsordnung, die die Freizuegigkeit von Menschen, Guetern und Ideen gewaehrleistet, erreicht werden kann.

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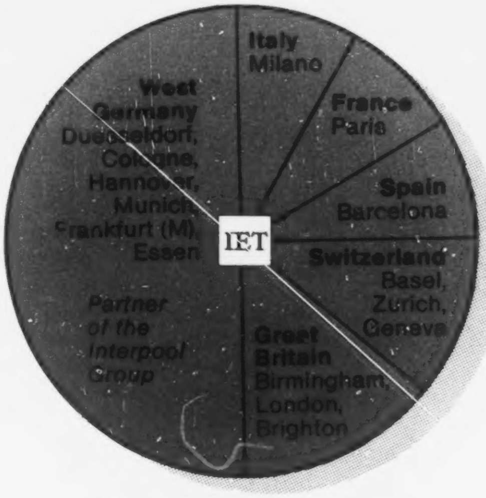

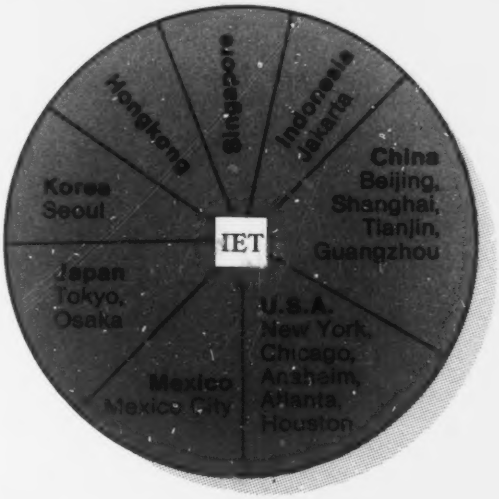

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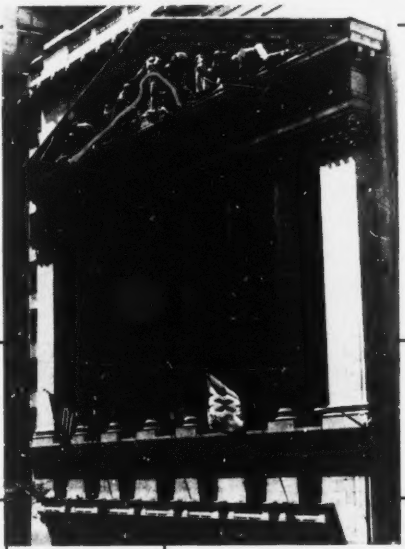

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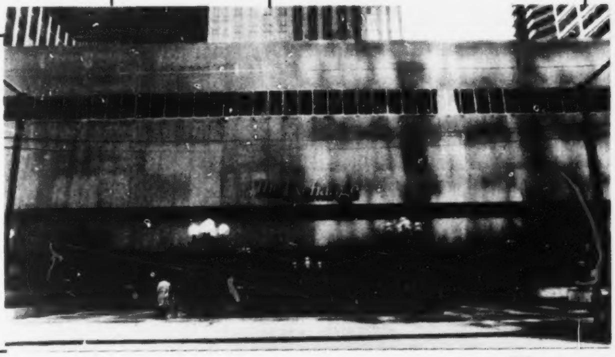

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Ueberlegungen hinsichtlich der internationalen Geldpolitik

Thoughts on International Monetary Policy

by Dr. Karl Otto Poehl
President of the
Deutsche Bundesbank

The economic upswing in the western industrial countries has proceeded rapidly in the course of 1984 to date. It is true that there are still some countries which have made progress of this kind largely in the wake of other economies where economic recovery started very early and very strongly – as in the United States – but more and more industrial countries have shaken off the burdens of the second oil price shock. They have developed resources of their own for clearing the obstacles to an increase in demand and production. A growing world economy – the OECD is expecting a real increase of more than 4% in GNP in the developed countries in 1984 – is a good basis for solving economic problems. It is, however, no substitute for necessary economic policy measures.

The monetary policy of the Deutsche Bundesbank is not free from constraints which are rooted in Germany's integration in the world economy.

Under the Bretton Woods system, this determination of monetary policy by the real economy was intensified by a rigid framework of monetary policy mechanisms. The autonomy of monetary control in Germany – and not only here – was restricted, whereas the United States, as the reserve currency country, did not really have to subject itself to strict monetary discipline.

The monetary policy of the Deutsche Bundesbank is not free from constraints which are rooted in Germany's integration in the world economy.

Today's international monetary order, where floating exchange rates coexist with the fixed exchange rate system of the EMS, has considerably expanded the scope for autonomous decisions in national monetary policy. This admittedly does not guarantee that the contribution which monetary policy can make to stabilizing economic trends is of necessity greater than it was before. On the contrary, it is important that the increased freedom of action should also be used with discretion. If in fact every country were to undertake steps to solve its internally-generated problems first, the prospects for the world economy would be much more favorable than they are at present: this general observation by the World Bank, published in its latest "World Development Report," is particularly true of monetary policy. One can note here, not without satisfaction, that in the Deutsche Bundesbank we have been acting on this principle for a long time now. The latest OECD report on Germany laid great emphasis on this point.

Even though German monetary policy only regained its freedom of action on the transition to floating in March 1973, a certain disillusionment about flexible exchange rates has set in over the years. New and unexpected constraints have been discovered again and again: monetary policy has proved to be neither free from external economic influences nor immune against imported inflation. Moreover, under conditions of floating there have been some very strong exchange rate fluctuations – with tendencies towards "over- and undershooting" – which in large part have been the consequence of differing inflation rates. But even "real" exchange rates have fluctuated considerably, a circumstance which in theoretical models of floating plays practically no role at all. Floating has resulted in another special source of friction for German monetary policy. When exchange rates against the U.S. dollar were floated, there was a diversification of foreign exchange reserves and this turned the Deutsche Mark into an alternative reserve currency.

When exchange rates against the U.S. dollar were floated, there was a diversification of foreign exchange reserves and this turned the Deutsche Mark into an alternative currency.

The resulting polarization of the U.S. dollar and the Deutsche Mark sometimes lifts the relationship between these two currencies out of the economically explicable fluctuation band. Just as the weakness of the U.S. dollar in 1978 was accompanied by an extremely strong Deutsche Mark, much the same is true today, in an inverse sense. It is obvious that the money creation process in Germany cannot but be affected by massive switches out of the U.S. dollar into the Deutsche Mark and vice versa. German monetary policy has thus come more under the influence of U.S. economic policy than has that of other industrial countries. It is true that this influence dwindles into insignificance when set against the dominance of the USA under the old Bretton Woods system. However, the mutual influenceability of the U.S. and German monetary policies remains characterised by a strong asymmetry in favor of the USA.

The transition to floating made no difference to the international interdependence of the interest rates forming on the market under conditions of free capital movements. Both before and after floating there was and is an exchange risk and a price at which one can cover this risk over the short term. However, exchange rates have become more erratic since the start of floating. Events on the foreign exchange market are influenced more strongly than before by exchange rate expectations. The greater the part played by such expectations, the greater is the likelihood of differences appearing and increasing between countries' nominal interest rate levels. An investor is content with a lower nominal interest rate if he believes that at least the interest rate differential can be earned on the exchange rate.

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By the same token, people shy away from a higher nominal interest rate if they fear they will lose at least the differential on the exchange rate. If Germany has succeeded in detaching its interest rates from the U.S. interest rate level to an astonishing extent, this is essentially due to the fact that the Deutsche Mark is being expected to appreciate. It has nothing to do with, say, our being able to manipulate long-term interest rates in such a way that they are no longer subject to the laws of international interest rate interdependence. This interdependence still exists, in a modified fashion, under conditions of floating, and cannot be eradicated mechanically, as is suggested by the often-heard word "decoupling."

Considering these basic relationships, it becomes clear why we in Germany follow developments on the U.S. financial markets and in U.S. economic policy with special attention. From our point of view – and in this we concur with most other industrial nations – the high interest rates in the USA are an element of the world economic scenario which demands sacrifices from many countries and which, moreover, may be destabilizing. At first sight, the remarkable dynamism of the U.S. economy would not really lead the observer to conclude that the high interest rates are doing more harm than than good in the USA itself. On the contrary, the onlooker gains the impression that the high interest rates are a stabilizing counterweight to an otherwise onrushing upswing carrying the seeds of inflation. Be that as it may, it must not be assumed that the U.S. economy is generally proof against the high interest rates. There are a whole series of factors which are blunting the impact of high interest rates on the current business climate there: the general tax deductibility of loan interest is one of these, just as are the considerable depreciation relief, the stronger recourse to self-financing among corporations and, in comparison to earlier booms, the sluggish increase in wage costs.

The latest upswing has shown how much the U.S. economy reacts to changes in interest rates,

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in spite of having such buffers against increasing rates. The economic revival was sparked off not only by fiscal policy – lower taxes and higher defense expenditure – but, – and most noticeably – by monetary policy. After all, by the end of 1982 the prime rate had virtually halved from more than 20% in 1981/82. The impression that the American upswing is resistant to high interest rates also becomes more relative when the question is looked at over somewhat longer time periods and when those sectors of the economy which are traditionally sensitive to interest rate changes are considered. It is probably no accident that, notwithstanding the dramatic recovery of the economy as a whole, housing construction and automobile sales this year will hardly exceed their 1979 level and corporate investment will be only slightly above its 1979 level. The future could well see a situation in which U.S. interest rates are higher than would be consistent with domestic economic equilibrium.

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U.S. interest rates and the external position might already be out of joint to some extent. At all events, the USA is now importing more capital than it needs to finance its present current account deficit. In this sense, interest rates, which are a major stimulus to investment in U.S. dollars, are too high. This "overfinancing" is reason no. 1 for the unusual strength of the U.S. dollar. Capital movements are not only the driving force behind what is happening on the foreign exchange markets, but in the final analysis they are also determining current account trends. Against the background of this "overfinancing," incidentally, the abolition of withholding tax on U.S. bonds held by nonresidents really appears superfluous. The capital "pull" exerted by the USA is being unnecessarily strengthened. From a non-American point of view it would perhaps have been desirable to accompany this tax measure by a relaxation in interest rates.

The increasing importance of capital transactions for the American balance of payments – which in part also reflects the U.S. dollar's weight as the dominant reserve currency – makes particularly urgent the question of how long the deficit in the external position will last. The rest of the world increased its net claims on the USA in 1983 by about 40 billion U.S. dollars. This year, these claims cannot but expand by more than double this amount and in 1985, too, a further increase in non-Americans' dollar assets will be necessary if the dollar is not to fall. It is obvious that foreign investors cannot accumulate claims on the USA indefinitely, unless improved investment terms make it attractive for them to do so. The longer this process goes on, the more unreliable and fragile it will become.

Given a high U.S. dollar rate, the American current account deficit will be financeable only at ever-rising interest rates. On OECD estimates, the United States will have a cumulative current account deficit of U.S. dollar 250 billion in the four-year period ending in 1985. The United States will thus become a net debtor to the rest of the world within the foreseeable future. For the current account this means that the hitherto still positive net contribution from interest receipts will change to a negative net position of interest payments to non-residents, which will increase the deficit on the current account. The United States could get into a vicious circle in this way, because every interest rate hike required to finance the deficit simultaneously widens the current account gap and entails an additional financing need.

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It would be wrong to rank the United States on account of its expected negative external position, together with the highly indebted developing countries. Firstly, the external debt of the USA is very small, both in relation to GNP and in relation to exports, compared with the corresponding ratios in the developing countries. Secondly, almost 100 percent of American external liabilities are denominated in U.S. dollars, so that in actual fact there is no "financing constraint." It remains disturbing, however, that a good deal of the foreign capital flowing into the USA is being used to finance consumption. So it does not bring in the yields which would have to be generated in order to earn the interest. It is just this sort of negative difference between the return earned with the capital and the costs of the capital which is responsible for the difficulties met by the highly indebted developing countries in duly fulfilling their payment obligations. Correcting the external imbalance in the USA is, in fact, an urgent necessity. The longer this adjustment is postponed, the bigger will be the potential necessary depreciation of the U.S. dollar. The inherent tension between financing and domestic adjustment is not suspended for the United States. The important thing is to dissolve this tension in the United States by means of constructive policy-making and not to fall back on some sort of defensive strategy, e.g. protectionism.

Doubts as to whether the United States and the world economy can survive the American current account deficit over the long term unharmed naturally do not mean that the positive effects which result from this imbalance can be overlooked. For the American economy, the current account deficit acts as a safety valve: it prevents overheating. For the rest of the world, the deficit is a transmission belt through which American economic dynamism is transferred to other economies. This transfer is by no means limited only to industrial countries or even to Japan, with its strong exports. The strong American import demand is a good thing, in particular, for the developing countries, although, on the other hand, U.S. interest rates are a heavy burden for them. The U.S. trade balance with developing countries has deteriorated in the last two years by U.S. dollar 30 billion. If in some debtor countries, e.g. Mexico and Venezuela, surpluses on current account are being earned, this is largely due to the fact that these countries have been able to improve their positions in bilateral trade with the USA.

Incidentally, thus far in the eighties, Germany's current account with the developing countries has also always been in deficit. In net terms, therefore, the Federal Republic has not contributed to the further indebtedness of the developing countries but has played a part in reducing their debts. But Germany, too, is one of those that are benefiting in external economic terms from the U.S. current account deficit. German exports to the United States in the first half of 1984 were almost 50% higher in value than in the corresponding period of the previous year. German export successes were not, however, confined to the USA, even if they reached an astonishing scale there. German goods are selling very well at present on almost all world markets, thanks in part to the soaring dollar. In the first six months of this year, German exports were in total almost one-tenth up on the corresponding period of 1983. This success was mainly due to the price advantages enjoyed by German exporters as a result, firstly of the real depreciation of the Deutsche Mark against the U.S. dollar and yen and secondly, of the small increase in costs in Germany, relative to the international average.

It goes without saying that the strong foreign demand is buttressing economic activity in Germany, but this is no reason for euphoria. Insofar as the improvement in competitiveness rests on an exaggerated Deutsche Mark depreciation, the resulting increase in production is on thin ice. Weak points and basic problems in the German economy are being papered over. There is even a danger of "wrong" exchange rate signals leading to wrong economic structures being built up. We experienced in Germany in the sixties that capacities were built up on the basis of wrong exchange rates. If a correction then takes place, and this can happen either through ad-

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justment inflation or through an exchange rate alteration, the danger of "overshooting" in the other direction is always very great. We have experienced this too, when the Deutsche Mark became caught in an appreciation spiral in 1977/78.

The real depreciation of the Deutsche Mark which has been in progress since 1979 is no promising strategy for securing sustained growth in Germany. It is not even enough to guarantee external competitiveness over the long term. This is because depreciation worsens a country's terms of trade, resulting via "depreciation-induced" price rises at home in a decline in real income. Moreover, particularly at a time when demand is going up at home, depreciation can lead to a price-wage-spiral with all the adverse consequences which this has for the economy and especially for employment. German exporters must be able to hold their ground on their markets even when the depreciation trend of the Deutsche Mark has come to a stop.

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In foreign trade it is particularly important that business relations be built up on a basis of predictability and reliability – foundations which prove rock-solid even when exposed to external disturbances. From this point of view it is not a "weak" currency but a "strong" one which safeguards competitiveness over the long term.

Moreover, strength must not be equated with destabilizing power. While a firm U.S. dollar helps to stabilize the global monetary system, an overstrong "greenback" may serve as a source of unrest. The high dollar rate and the U.S. current account deficit are unmistakable signals of profound imbalances in the world economy and of national economic policies which are out of joint.

In the final analysis, the Americans have more cause to be concerned about these imbalances than have the other western industrial countries. Of late, a considerable log-jam of economic dislocations and dangers has accumulated in the USA: the distorted competitive position of the United States abroad, the unbalanced economic recovery, the high interest rates, the risks of default hanging over the banking system, the financing of the current account deficit, the deficits in the U.S. federal budget. All these are economic trends which not only give grounds for action but also reduce the economic policy-makers' room for maneuvre. It would be disastrous if, given this restricted room for maneuvre, solutions to the problems were sought by interventionists means rather than with market measures. Unfortunately, the calls for more protectionism in the USA are all too audible.

It is very difficult to predict in which way the difficulties which have built up in the USA will be resolved. It would definitely be desirable for the American economy to have a "soft landing," which might be associated with an "orderly retreat" of the strong dollar and a reduction in the current account deficit. If, however, there were to be a recessionary stabilization crisis in the USA, the world economy as a whole would be badly affected.

In the industrial countries this would have especially negative implications for employment. Most countries, with the exception of the USA, which shows an enviable degree of flexibility on the labor market, are still a long way from the economic policy goal of full employment. A stabilization crisis in the United States would hit, in particular, those of the developing countries which are highly indebted and are fighting to generate foreign exchange surpluses through increased export earnings. It would be fateful if, as a consequence of a drastic adjustment process in the American economy, the debt problem, on which impressive progress has been made since autumn 1982, were to worsen again. A double burden of an American stabilization crisis and a possible debt debacle could lead to an appreciable reduction in living standards globally.

In spite of many economic risks world-wide, there is no cause to paint a picture of apocalyptic gloom which would condemn economic policy to mark time fatalistically. It is the duty of economic policy to combat crises.

Experience in the last few years has shown that economic reality can be shaped to serve Man and that crises are soluble. In the interest of continued and prosperous growth as well as of the removal of economic and social want, especially in the less-developed regions of our planet, economic policy must take up the challenge. ■

DEUTSCHE ZUSAMMENFASSUNG

Der Bundesbankpraesident Karl-Otto Poehl haelt eine Korrektur des aussenwirtschaftlichen Ungleichgewichts in den USA fuer unerlaesslich. In seinem Beitrag fuer das Jahrbuch der Deutsch-Amerikanischen Handelskammer vertritt der Bundesbankchef die Auffassung, dass die "potentiell notwendige Abwertung fuer den US-Dollar" um so groesser sein werde, je laenger das Ungleichgewicht in den aussenwirtschaftlichen Beziehungen der Statten weiter bestehen bleibe.

Poehl aeussert die Befuerchtung, dass eine "rezessive Stabilisierungskrise" in den USA die gesamte Weltwirtschaft schwer in Mitleidenschaft ziehen koenne und die Beschaeftigungslage in den Industrielaendern verschlechtern werde. Eine solche Entwicklung werde vor allem aber die hochverschuldeten Entwicklungslaender treffen und die internationale Schuldenproblematik erneut verschaerfen. "Eine Doppelbelastung durch amerikanische Stabilisierungskrise

und moegliche Schuldendebakel koennte zu einer spuerbaren Verringerung des Wohlstandes in der Welt fuehren", gibt Poehl zu bedenken.

Gleichwohl sieht der Bundesbankpraesident trotz der vielen weltwirtschaftlichen Risiken derzeit "keinen Grund, ein apokalyptisches Krisengemaelde zu entwerfen, das die Wirtschaftspolitik zu fatalistischem Stillhalten verurteilt". Es sei vielmehr Aufgabe der Wirtschaftspolitik, die Krisen zu bekaempfen.

Poehl warnt zugleich vor protektionistischen Abwehrmassnahmen der USA. Die Rufe nach mehr Protektionismus seien in den Staaten leider unueberhoerbar. Es waere fatal, so Poehl, wenn die USA die derzeitige wirtschaftspolitische "Konfliktloesung nicht mit marktwirtschaftlichen, sondern mit interventionistischen Mitteln" betreiben wuerden. Poehl sieht im hohen Dollarkurs und im amerikanischen Leistungsbilanzdefizit "unuebersehbare Signale tiefgehender Ungleichgewichte in der Weltwirtschaft und nicht miteinander harmonisierender Wirtschaftspolitiken". Letztlich habe aber die amerikanische Seite mehr Grund, ueber die Ungleichgewichte besorgt zu sein, als die anderen westlichen Industrielaender. In den USA habe sich naemlich mittlerweile ein "beachtliches Mass an wirtschaftlichen Verwerfungen und Gefahren aufgestaut", schreibt Poehl, der in diesem Zusammenhang besonders auf die verzerrte Wettbewerbssituation der amerikanischen Wirtschaft im Ausland, die unausgeglichene Konjunkturerholung, die hohen Zinsen, die ueber dem US-Bankensystem schwebenden Ausfallrisiken, die Finanzierung des Leistungsbilanzdefizits und die Fehlbetraege im amerikanischen Bundeshaushalt hinweist. "All dies sind wirtschaftliche Entwicklungen, die nicht nur Handlungsbedarf begruenden, sondern auch den wirtschaftspolitischen Spielraum einengen", betont der Bundesbankpraesident.

Aus seiner Sicht laesst sich nur schwer voraussagen, auf welche Weise sich der Konfliktstau in den USA letztlich aufloesen wird. Wuenschenswert waere—so Poehl—"sicherlich eine sanfte Landung" der amerikanischen Konjunktur, die mit einem geordneten Rueckzug des Dollarkurses und einem Abbau des Leistungsbilanzdefizits einhergehen wuerde.

Der Bundesbankchef weist darauf hin, dass die USA kuenftig mehr Geld ins Ausland ueberweisen muessten als sie an eigenen Einnahmen aus auslaendischen Kapitalanlagen haetten. "Die USA koennten diesbezueglich in einen Teufelskreis geraten, weil naemlich jede zur Defizitfinanzierung notwendige Zinserhoehung gleichzeitig den Leistungsbilanzfehlbetrag erhoeht und zusaetzlichen Finanzierungsbedarf nach sich zieht", warnt Poehl.

Gegenwaertig importierten die USA mehr Kapital als zur Finanzierung ihres Leistungsbilanzdefizits notwendig waere", meint Poehl. "Die Ueberfinanzierung ist Hauptursache fuer die aussergewoehnliche Staerke des US-Dollars." Nach Ansicht des Bundesbankpraesidenten wird eine weitere Aufstockung der Dollaranlagen von Nichtamerikanern erforderlich sein. "Es liegt auf der Hand, dass auslaendische Investoren nicht unbegrenzt Forderungen gegenueber den USA akkumulieren, ohne dass ihnen dies durch verbesserte Anlagekonditionen schmackhaft gemacht wird", meint Poehl. "Dieser Prozess wird, je weiter er fortschreitet, immer unzuverlassiger und zerbrechlicher."

Die bemerkenswerte Dynamik der amerikanischen Konjunktur lasse—so Poehl—zunaechst kaum vermuten, dass die hohen Zinsen auch in den USA selbst mehr schadeten als nutzten. Im Gegenteil, man habe eher den Eindruck, als wuerden die hohen Zinsen ein stabilisierendes Gegengewicht zu einem sonst ueberschaeumenden und inflationstraechtigen Aufschwung sein. "Dennoch darf man nicht davon ausgehen, dass die Wirtschaft generell immun gegen die hohen Zinsen ist", gibt der Bundesbankpraesident zu bedenken.

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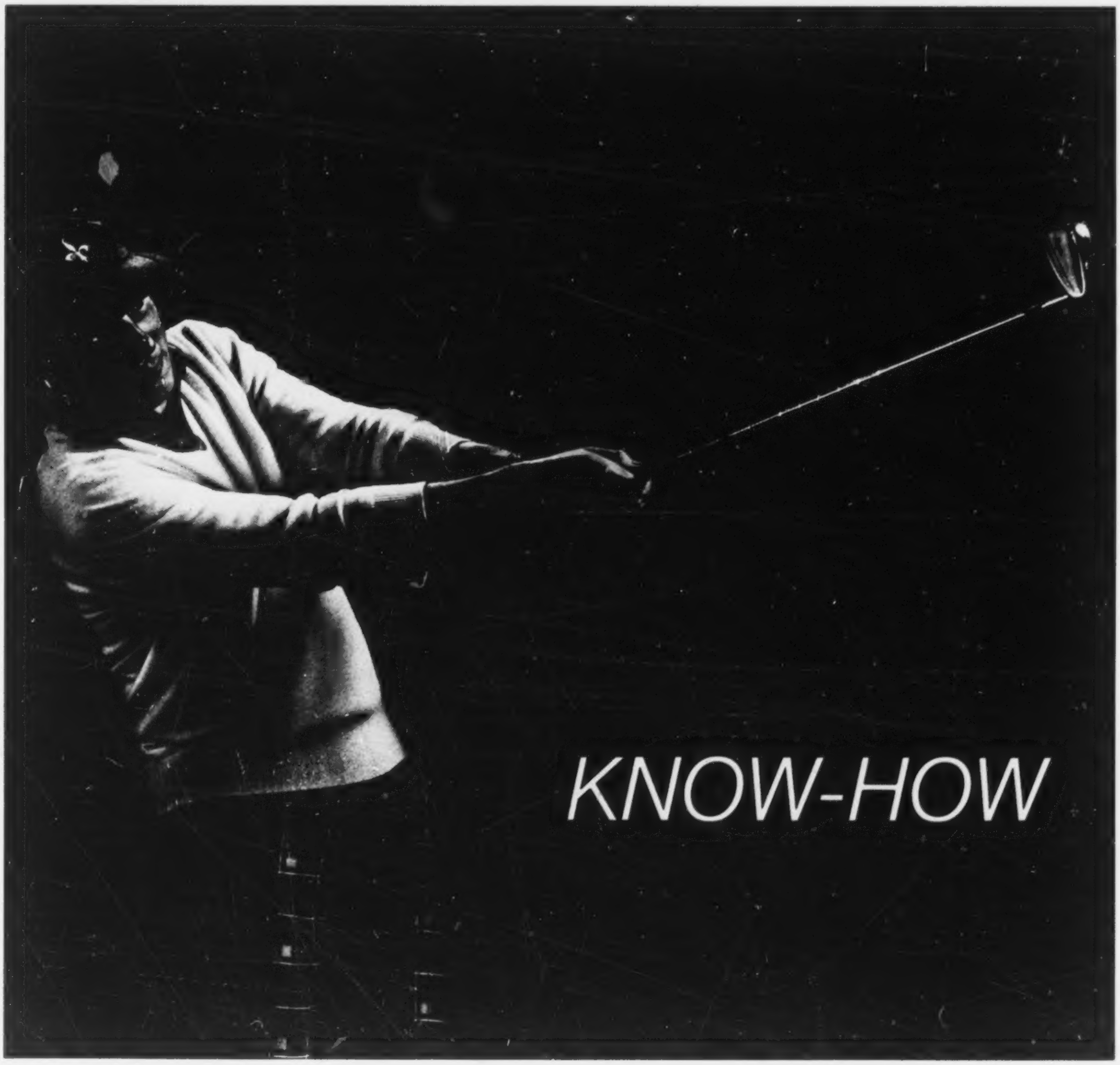

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Ueberblick ueber die US-Wirtschaft

Overview on U.S. Economy

by Paul A. Volcker
Chairman,
Board of Governors
of the
Federal Reserve System

Measures of aggregate economic activity, employment, costs, and prices have provided an almost unbroken string of favorable news so far in 1984. The process of recovery from the deep and prolonged recession – a recovery that began amid widespread doubts about both its potential vigor and staying power – had proceeded strongly through 1983. There were widespread anticipations early this year that, as we moved beyond the initial recovery into a new expansion phase, the pace of growth would slow. But, in fact, growth actually accelerated as we moved into 1984. During the first half of 1984, the economy as a whole grew at nearly a 9 percent annual rate, compared with a 6½ percent pace during 1983. In addition, almost three million more people have been employed so far this year, bringing the total gains over the past 18 months close to 7 million, and the unemployment rate has dropped to about 7 percent.

Much of the strength in economic activity this year has come from consumer spending, as unit auto sales in the first half rose to the highest level since mid-1979. With real income growth strong and consumer confidence high, the demand for other big ticket items – such as furniture and appliances – also has been robust. In the business sector, sales and profits have been rising rapidly, prompting a vigorous expansion in outlays for new plant and, particularly, equipment. The widespread need for acquiring new electronic and data processing technologies has continued to provide an element of strong demand for investment in capital goods. Potentially, this investment will be reflected in rising productivity, although the extent to which the trend of productivity growth is rising faster than during the late 1970's is still not clear.

Despite the surprising strength of activity this year, inflationary pressures (as measured by most summary price measures) have to this point remained subdued.

In fact, a number of sensitive commodity prices have dropped recently, following sizable cyclical increases. Highly competitive domestic and international markets, influenced by the strength of the dollar overseas and continued strong efforts to discipline costs, have been key factors contributing to greater price stability. The net result has been rising productivity and good gains in real income, even while increases in nominal wage rates have remained moderate.

Looking only at these overall measures, this recovery and expansion period has been atypical – atypical in the sense that rapid expansion has been maintained longer after the recession trough than in any comparable cyclical period since World War II, excepting only the Korean War episode. But the period has been atypical in other ways as well – in ways that potentially will have severely adverse implica-

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tions unless dealt with by timely and effective policy action.

Imbalances and Strains

In any period of recovery and expansion, some sectors fare relatively better or worse than others, and in that general respect this period has been no exception. What is different, in degree and in kind, is that some inevitable unevenness in patterns of growth in particular sectors has been aggravated by the massive and related imbalances in both our fiscal position and our international trading accounts and by some strains in financial markets.

As you know, rapid growth has been reflected in some reduction in the budgetary deficit. The Congress is in the process of enacting the so-called "downpayment" against future deficits, part of which has already been signed by President Reagan. But the hard fact is, as I am sure the Congress is fully aware, the deficit remains huge in absolute and relative terms. Absent further action, little or no further decline now seems probable for 1985 and beyond. Indeed, we cannot rule out that the deficit could be higher next year, even assuming the economy continues to move toward "full employment" levels.

That circumstance has been reflected in continued large Treasury borrowings, and expectations of indefinite continuation. Meanwhile, private credit demands, responding to and supporting growth in consumption and investment, have accelerated. But the sources of domestic funds supplied to credit markets have fallen far below our combined public and private demands for credit. In these circumstances, interest rates – already historically high – tended to move still higher during the spring.

Those high interest rates, combined with favorable economic conditions generally in this country, have attracted more and more capital from abroad to help meet our domestic financing needs, and the dollar has appreciated despite deterioration in our trade and current accounts. The strong dollar certainly has been a potent force helping to contain inflation and reduce pressures on our financial markets. But what is in question is the sustainability of that process as the United States becomes more and more dependent on foreign capital, as our export and import-competing industries are damaged and seek protectionist relief, and as interest rate pressures remain strong. In that sense, we are literally living on borrowed time.

The continuing difficulties of some heavily indebted developing countries in Latin America, and in some other places as well, has been another point of uncertainty. A sense of greater concern has, ironically, come at a time when several of the largest borrowers have more clearly made substantial progress toward reducing external financing requirements and toward carryingout the more fundamental adjustments that should provide a firm base for their renewed growth.

That sense of concern has been related importantly to both the increases in interest rates over the spring, and to fears of protectionist measures damaging the capabilities of the indebted countries to export. Put another way, the related deficits – budgetary and trade – place heavy pressure on the international financial and trading systems – pressures that can only be dealt with by attacking the source of the problem.

Within the United States, the relatively high level of interest rates has aggravated financial strains in the farm sector. Many thrift institutions face the prospect of weak earnings at a time when capital positions have been eroded by losses earlier in the decade. And, despite the rapid growth of the economy and strong increases in business profitability overall, more stable prices have exposed some weaknesses in credit practices of banks and others in the energy and other areas encouraged by earlier inflationary expectations.

These developments have provided the setting for the implementation of monetary policy thus far in 1984 and for the review of monetary and credit objectives by the Federal Open Market Committee for 1984 and next year.

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In making those projections, Committee members also noted that the continued high budget deficits and other factors noted earlier, unless dealt with effectively, would pose substantial risks of less satisfactory results with respect to economic activity or prices or both. In that sense, the projections should not be taken to assume that satisfactory results are assured, absent policy adjustments.

The economic projections, of course, took account of the decisions made on monetary policy. Broadly, monetary policy will remain directed toward providing enough money to support sustainable growth while continuing to encourage greater price stability over time. For 1985, the tentative decision was reached to reduce the ranges slightly for both M1 and M2, specifically by lowering the top end of the range specified for 1984 by 1% and ½%, respectively. The target range for M3 and the monitoring range for domestic credit were left unchanged. These tentative decisions for 1985 will be carefully reviewed at the start of next year.

The Committee also reviewed the relative weights to be placed upon the monetary aggregates, and felt that roughly equal weight should be given each of them in implementing policy. However, appraisal of their movements, and relationships among them, will continue to be judged in light of developments with respect to the economy, domestic and international financial markets, and price pressures.

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Although both M1 and M2 have grown within their targeted ranges for 1984, M3 and particularly domestic credit, have expanded faster than anticipated.

Credit growth has, in fact, continued to outpace that of nominal GNP, as was the case last year but contrary to longer-term trends. Growth in the business component of nonfinancial credit has been amplified by an unusual spate of merger activity and corporate financial reorganizations – so-called "leveraged buyouts" – that had the effect of substituting debt for equity. The implications of those financings, while potentially adverse from the standpoint of the overall financial strength of particular businesses, are relatively neutral from the standpoint of demands on real resources and overall credit market conditions. Estimated adjustments for that activity on the rate of overall credit growth would reduce the indicated expansion over the first half of 1984 from a rate of about 13 percent to 12 percent, closer to, but still above, the monitoring range.

In implementing the policies reflected in the various targets, steps were taken during the late winter and early spring to increase somewhat pressures on bank reserve positions, and the discount rate was raised once, from 8½ to 9 percent. Reserve pressures have not changed appreciably since that time, as reflected in relatively unchanged borrowings at the discount window (apart from those by the troubled Continental Illinois Bank). With both M1 and M2 remaining within their target ranges, and against

Before initial storage in one of the 122 vault compartments, gold bars are weighed, and the melt and fineness numbers inscribed on each bar are recorded.

Indicators of overall economic performance have been exceptionally favorable for more than a year. So far, a strong economic expansion has been consistent with better price performance than we have enjoyed for many years.

the background of the economic, price, and financial market developments reviewed earlier, stronger restraining actions on money and credit growth generally have not appeared appropriate. At the same time the relatively rapid rates of growth in M3 and domestic credit are flashing cautionary signals.

While pressures on bank reserves did not increase further,both long- and short-term interest rates rose over the spring. The continued heavy credit demands, expectations that those demands would persist against the background of the huge federal deficit and strong economic expansion, and fears of a resurgence of inflationary pressures as both labor and capital are more fully employed,all played a part.

The atmosphere surrounding credit and banking markets at times during recent months has been appreciably influenced by the apparent difficulties of one of the nation's largest banks and by continuing concerns over the ability of some developing countries to service debts held mainly by large commercial banks around the world.

Orderly and full resolution of the latter problem will require a strong cooperative effort by borrowers and lenders alike over a considerable period of time. The difficult process of internal and external adjustment is beginning to bear fruit in important countries in Latin America, including Mexico, Venezuela and Brazil. In other countries the adjustment process is less advanced, but the progress of some, both in adjustment and financing, can point the way for others. While the challenge for all remains substantial, with effort on all sides, the problem is manageable.

Recent concerns about strains on our banking institutions have focused on the problem of Continental Bank. That situation is unique for a large bank, but the episode may be an object lesson for all of us concerned with maintaining the strength of the financial system. In a period of rapid economic expansion, there can be temptations to relax credit standards in an effort to maximize growth. Bank managers need to appraise the risks prudently, taking full account of the possibility of a more adverse economic and interest rate environment. That, of course, is and should be the customary policy of banks, and I sense that some have reviewed their practices to make sure they are appropriate in today's circumstances.

Indicators of overall economic performance have been exceptionally favorable for more than a year. So far, a strong economic expansion has been consistent with better price performance than we have enjoyed for many years.

There are obvious strains, imbalances, and risks that could undercut much of what has been achieved. The only real question is whether we as a nation will deal with them promptly and forcefully with constructive public policies, consistent with long-term growth and stability, or whether we will be content, despite all the strains and dangers, to let events simply take their course. Short-sighted relapses into lack of financial discipline, widespread protectionism, and wage and pricing excesses could only aggravate the situation.

None of these problems will be cured by attempts to drive interest rates down artificially by excessive money creation; the inflationary repercussions could only aggravate the situation. Nor can distortions arising from other sources be dealt with effectively by any general monetary measures.

It is, in the end, the choice between building on the enormous progress of the past to achieve *sustained* growth in a framework of greater stability or a relapse into inflationary economic malaise. With that choice clear, I am confident that the needed policies are well within our collective grasp.

In the areas of our responsibility—both monetary and supervisory policies—we are working toward achieving stability and growth. We count on progress in other directions as well. The facts with respect to growth and inflation for more than a year demonstrate that we all have much upon which to build. But there are also clear signals that—far from basking in the warmth of past and present progress—we must undertake the strongest kind of effort to convert potential success into sustained growth and stability. ■

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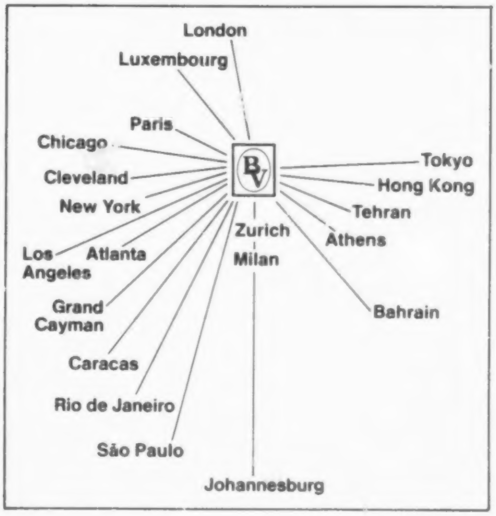

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DEUTSCHE ZUSAMMENFASSUNG

Vielen Zweiflern zum Trotz habe die wirtschaftliche Erholung in den USA seit 1983 ohne neuen Inflationsschub angehalten, hebt Fed-Chef Paul Volcker hervor. Eine Reihe von Guetern sei sogar billiger geworden. Volcker fuehrt das relativ inflationsfreie Wachstum in den Staaten u.a. auf den scharfen Wettbewerb auf den amerikanischen und den internationalen Maerkten zurueck. Neben der Staerke des US-Dollar seien Schluesselfaktoren fuer die bessere Stabilitaet im Land die Bemuehungen gewesen, die Kosten in den Griff zu bekommen. Diese Anstrengungen sind nach Darstellung von Volcker nicht ohne Erfolg geblieben. Unter dem Strich haetten sie zu steigender Produktivitaet und einem hoeheren Realeinkommen der Bevoelkerung bei nominal nur moderat gestiegenen Loehnen gefuehrt.

Volcker bewertet die wirtschaftliche Erholung in den USA als in mehrfacher Hinsicht "atypisch". Lasse man den Korea-Boom ausser Betracht, so habe es in der Nachkriegszeit bisher keine vergleichbar starke Erholungsphase gegeben. Allerdings sei die jetzige Expansionsphase auch in anderer, weniger guter Hinsicht "atypisch", meint Volcker unter Hinweis auf die hohen amerikanischen Defizite in der Zahlungs- und Leistungsbilanz sowie mit Blick auf die Ungleichgewichte auf den Finanzmaerkten. Durch diese Ungleichgewichte werde die Situation in verschiedenen Wirtschaftsbereichen erschwert, die noch nicht in den Genuss der hohen Wachstumsraten gekommen seien.

Der Fed-Chef laesst keinen Zweifel aufkommen, dass mit raschen Erfolgen beim Abbau des Staatsdefizits nicht zu rechnen sei. Die harte Tatsache sei, dass trotz der ersten beschlossenen Massnahmen (downpayment) das US-Staatsdefizit in absoluten und relativen Zahlen riesig sei. Durch die hohe staatliche Kreditaufnahme in Verbindung mit der infolge der Konjunkturbelebung gestiegenen privaten Kreditnachfrage reiche die Ersparnisbildung im Land nicht mehr aus, um den Geldbedarf zu befriedigen.

Rueckblickend meint Volcker, dass der starke Dollar und das auslaendische Geld, das ins Land geflossen sei, sicherlich wirksame Waffen gewesen seien, um die Inflation einzudaemmen und den Druck auf die heimischen Finanzmaerkte zu verringern. Zugleich stellt er aber die Frage, was letztlich der Preis fuer einen solchen Prozess sei, bei dem die USA mehr und mehr vom auslaendischen Kapital abhaengig wuerden und die eigene Export-Import-Industrie immer mehr unter Druck gerate und nach Protektionismus rufe. Hinzu kaeme die unveraendert starke Belastung durch hohe Zinsen. "Wir leben buchstaeblich auf Kosten der Zukunft", stellt Volcker fest.

Er warnt vor einem Rueckfall in finanzielle Disziplinlosigkeit, weitreichenden Protektionismus und erneut exzessiv steigende Loehne und Preise. Auch koenne kein Problem dadurch geloest werden, dass man die Zinssaetze kuenstlich verringere durch massive Geldschoepfung. Die inflationaeren Auswirkungen eines solchen Schrittes wuerden die Situation nur verschaerfen. Letztendlich stehe man vor der Wahl, entweder die deutlichen Wachstumserfolge und die gewonnene groessere Geldwertstabilitaet weiter zu festigen oder in eine Inflationswirtschaft zurueckzufallen.

Ein weiterer Punkt der Unsicherheit fuer die amerikanische Wirtschaft sind nach Meinung von Volcker die anhaltenden Schuldenprobleme in Lateinamerika und anderswo. Zur neuen Schuldenkrise sei es ironischerweise zu einem Zeitpunkt gekommen, an dem verschiedene grosse Schuldnerlaender bereits substantielle Fortschritte bei der Verringerung ihrer Auslandsverschuldung und der Verbesserung ihrer eigenen wirtschaftlichen Leistungsfaehigkeit gemacht haetten. Die neue besorgniserregende Entwicklung in diesen Laendern sei besonders ein Ergebnis der hohen Zinsen und der protektionistischen Massnahmen, durch die Exportmoeglichkeiten der Schuldnerlaender beschnitten worden seien.

Die Loesung der Schuldenprobleme verlange starke gemeinsame Anstrengungen von Schuldnern und Glaeubigern ueber einen betraechtlichen Zeitpunkt hinweg. Der Fed-Chef aeussert sich zuversichtlich hinsichtlich eines Erfolges solcher Schritte. Der schwierige Prozess der inneren und aeusseren Neuregelung beginne erste Fruechte in den Laendern Lateinamerikas, einschliesslich Mexiko, Venezuela und Brasilien, zu tragen. In anderen Laendern sei das Schuldenmanagement noch nicht soweit fortgeschritten. Doch scheinen nach Meinung von Volcker auch diese Probleme mit Anstrengungen auf allen Seiten loesbar.

Im weiteren geht der Fed-Chef im Detail auf die fuer 1985 ins Auge gefassten Zielkorridore bei den verschiedenen Geldmengen M1, M2 und M3 ein. Auch 1985 solite nach seiner Ansicht die US-Geldpolitik darauf ausgerichtet bleiben, ein nachhaltiges Wirtschaftswachstum zu foerdern bei gleichzeitiger Beruecksichtigung der Preisstabilitaet.

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- construction services.

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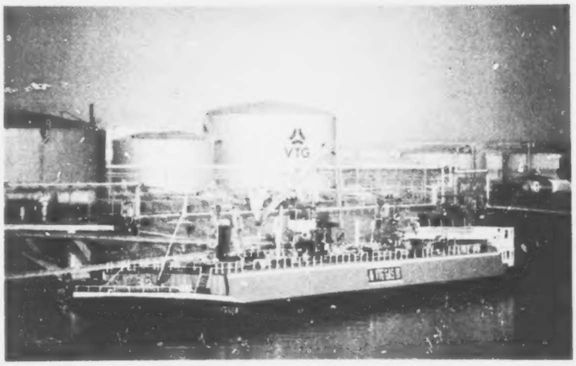

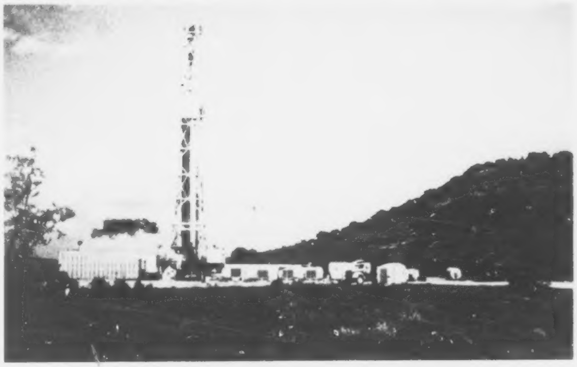

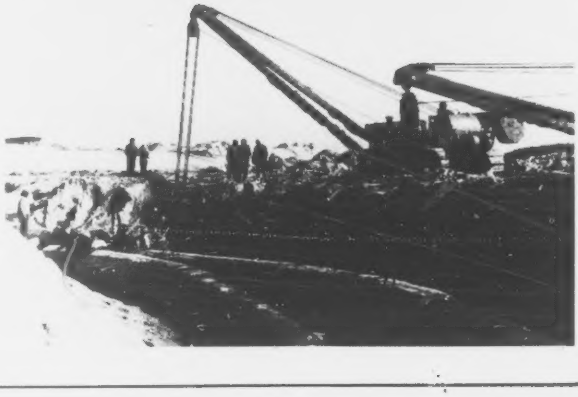

1 Shovel loader picking up loose rock at the Preussag Rammelsberg ore mine.
2 Europe's largest self-propelled vessel for the transport of pressurized gases in front of the VTG Tank Terminal in Duisburg.
3 Sinking an exploration well in Crockett County, West Texas
4 Lowering a pipeline at the Rio Grande do Sul by Conduto Ltda., Rio de Janeiro.

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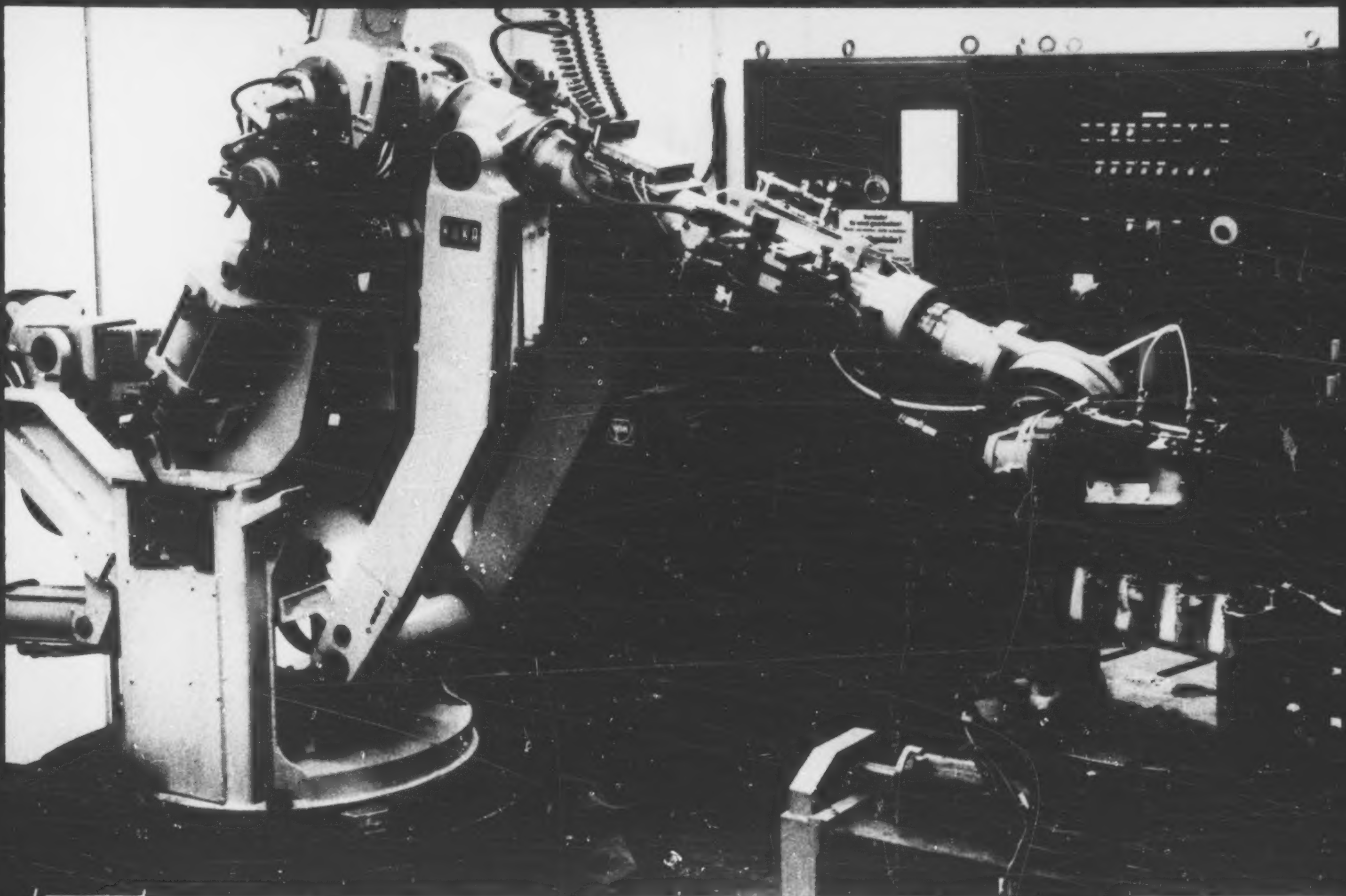

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Nordrhein-Westfalen – Vom Land der Zechen zum modernen Industriestandort

North Rhine-Westphalia – Old Mining Area Moves into Modern Industry

by Johannes Rau
Governor of the State of
North Rhine-Westphalia

The "Land of Collieries and Cathedrals" is the name given to North Rhine-Westphalia more than 20 years ago. Nothing has altered with regard to the cathedrals and the many cultural treasures between Aix-la-Chapelle and Minden, between Siegen and Kleve. North Rhine-Westphalia is a land with many theatres and universities, and it ranks only after Bavaria and Baden-Württemberg as the most important tourist state in the Federal Republic. 17 million people live here, more than a quarter of the population of West Germany. They constitute 29% of the German industrial work force and earn 27% of the Gross Domestic Product.

It is, however, a long time since the collieries, once the symbol of the high performance of heavy industry on the Rhine and Ruhr, ceased to be typical for the economy of the state.

The number of pits dropped from 140 in 1957 to 25 in 1984. Yet North Rhine-Westphalia remains to this day the industrial centre of the Federal Republic of Germany. Its economy is composed of a very varied range of branches. Thus, the chemical industry with its highly developed, strongly automated production technology is at present the sector with the highest turnover, followed by mechanical engineering, the foodstuffs and semiluxuries industry, the iron and steel producing industry and petroleum processing. Coal mining ranks only after all these.

The statement has been made, both oversimplified and erroneous though it is, that the so-called "industries of the future" have no opportunities for full development in North Rhine-Westphalia. This is contradicted by the facts:

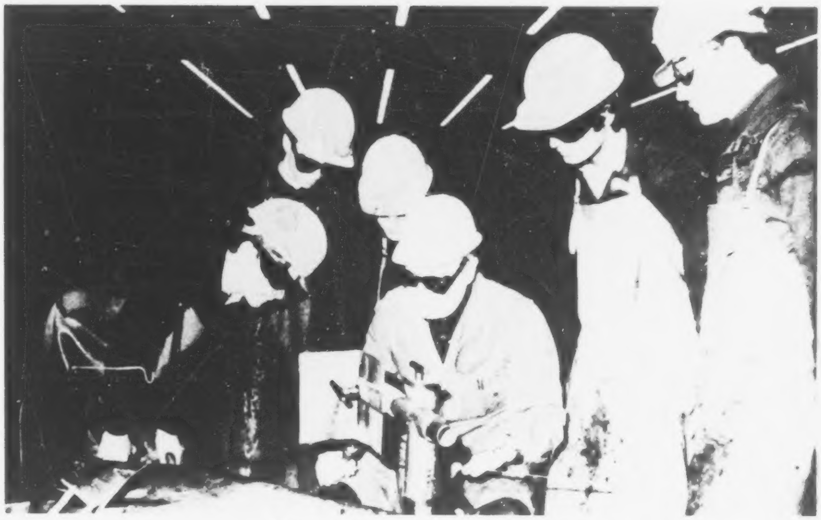
- the largest computer construction company in the Federal Republic is in North Rhine-Westphalia.
- Three of the six largest German software consulting firms have their base in North Rhine-Westphalia.
- 65% of all research potential in the field of information technology in the Federal Republic is domiciled on the Rhine and Ruhr.
- biotechnology and genetic engineering have superb locations at the universities of Cologne, Bielefeld and Düsseldorf and in the atomic research centre in Jülich.
- polytechnic research and non-university research institutes in the sphere of new materials in North Rhine-Westphalia are equipped with both staff and resources of well above average standards.

Nonetheless, North Rhine-Westphalia has structural and growth problems. Due to the drastic changes in the structure of the entire economy of North Rhine-Westphalia, the magnitude of the problems is above average, as in other traditional industrial regions of the

Efforts to transform technological progress into new products and manufacturing processes are being reinforced throughout the entire state.

world. Efforts to transform technological progress into new products and manufacturing processes are being reinforced throughout the entire state.

For instance, it is a matter of staying at the top in the development of new materials. The steel industry will have to take a long-term advantage of its market opportunities in important fields such as the power station industry, chemical and petrochemical process engineering, motor and turbine construction. But it is also a matter of continuing to develop compound materials. In the field of plastics and fibre manufacturing, in the metal industry, we have very good basic conditions in the form of appropriate research institutes and a variety of processors and users.



Group of trainees in welding shop.

How can further efforts be mobilised, and what further general conditions can be created by Federal government and must be created by our state of North Rhine-Westphalia? Where should particular emphasis be placed in order to achieve a technological spurt?

On my travels in the USA and Japan, I have become acquainted with a number of models whereby top-level research and its transformation into economic action are promoted in those countries. The efforts of Governor James B. Hunt in North Carolina seemed to me to be of particular interest. In the Research Triangle Park Institute in that state, the universities and firms are located in an outstanding geographical and organisational relationship to one another.

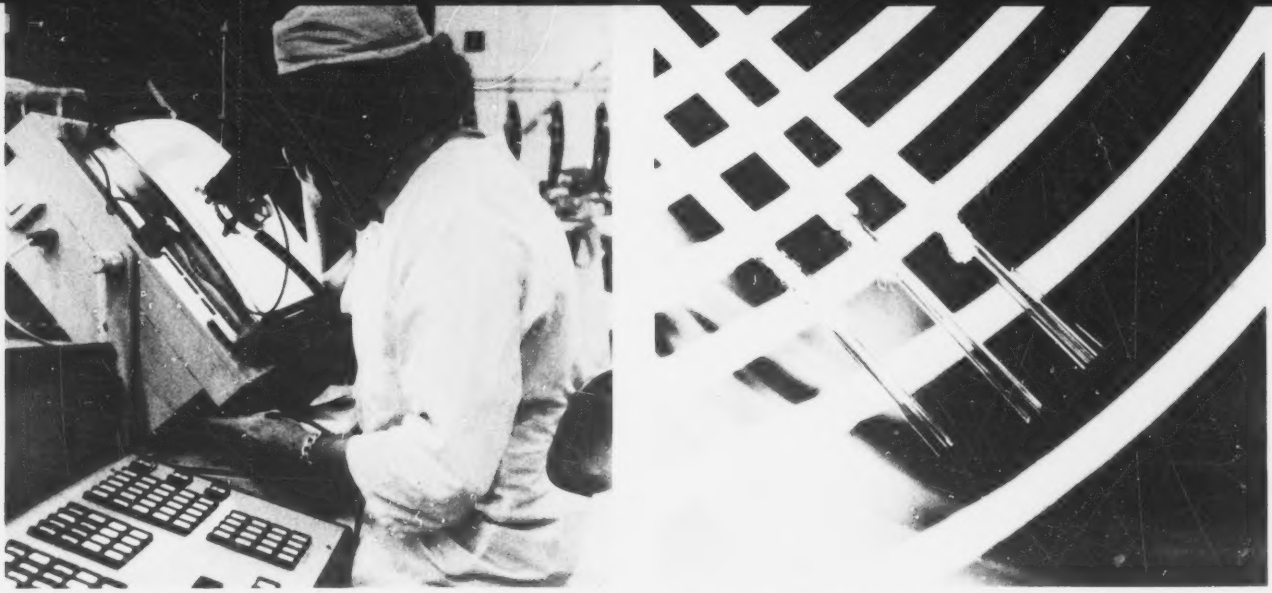
Their experience in building up and forming this technology centre is to be used in building up North Rhine-Westphalian technology parks as a starting point for further developments in NRW. Governor Hunt and I announced in a joint statement that we intend to exchange junior executives and management personnel, and that scientists from North Carolina and North Rhine-Westphalia will carry out joint research in the fields of computer software, computer science, biomedicine and genetic engineering technology, medical technology, atomic research, the textile industry and environmental protection. Finally, we want to work together on the construction and operation of manufacturing plants, to jointly open up new opportunities for supply, especially for medium-sized firms, and to make joint approaches on large-scale projects.

In the examples I studied in the US and Japan, one thing became clear: top-level research is essential as a challenge to state management and an attraction to entrepreneurial potential. A state share in funding is another essential general condition.

The state government has over the past decades established and consolidated new universities, especially in the industrial areas of the state. Special value was attached to the establishment of new polytechnics in the industrial settings of the Rhine and Ruhr. In that area, there are now 175,000 students studying in seven old and new scientific universities. The number of jobs in polytechnics in NRW rose between 1971 and 1982 from around 34,000 to 54,000. Around 20,000 of these are scientific staff. Ten Max-Planck-Institutes, four Fraunhofer Institutes and three large-scale research establishments round off the technological research picture in North Rhine-Westphalia.

The state government has set further concrete general conditions in its programmes for the modernisation of industry. These include the technology programme for the economy, the technology programmes for energy, steel and coal mining, project aid through the Minister of the Economy and programmes for the improvement of infrastructures, the quality of

In the Research Triangle Park Institute in that state, the universities and firms are located in an outstanding geographical and organisational relationship to one another.



Highly advanced measuring and testing equipment. Max Planck Institute for Systems Physiology.

State responsibility for an innovative climate lies particularly in the provision of infrastructures.

housing and the environment. The state government has earmarked sums going into the thousands of millions of marks for the implementation of these plans.

But that is still not enough. The problem as I see it lies in the way in which we can develop more flexibility, a more innovative atmosphere and new forms of organisation and management to enable absolutely top-level performance to crystallise out.

For this we must, on the one hand, attract outstanding scientists and make increased efforts to bring other types of research institutes than universities to our state. On the other hand, we must make sure that unusual research projects and promising new openings are not only encouraged but also integrated into the economy and manufacturing processes at the same time.

In recent months the state government has worked out a draft concept focussing on such additional technological and research emphases. Thus, whilst the technological programmes already mentioned are intended to support the readjustment and reorientation of existing branches of industry, an additional programme entitled "Technologies of the Future" is aimed at giving small and medium-sized firms in particular the opportunity to advance to virgin shores in technology. It concerns eight selected areas of technology which have a special part to play in the industrial, ecological and social development of North Rhine-Westphalia. These are environmental technologies, energy technologies, microelectronics, measuring and control engineering, information and communications technology and materials technology.

State responsibility for an innovative climate lies particularly in the provision of infrastructures.

The transportation network, the amenities and waste disposal facilities offered by North Rhine-Westphalia are incomparably good. For a research-intensive economy and for all services, the construction of a modern information and communications network is absolutely essential. It will be an important criterium and competition to be able to relay, process and store data and information faster and more comprehensively than ever.

For this purpose the state government has had a "Telecommunications Development Plan" drawn up which documents the scale of demand. I will just quote one fact: over 30 large companies want to install video conference studios. In order to satisfy this demand, we shall need fibre optics cabling, which will soon meet with an enormous demand in such a densely-occupied region as North Rhine-Westphalia.

Installation of high tension lines.

Computer aided design in automobile industry.

In addition to spreading data networks and organising technology transfer, the provision of capital funding is the third important factor for an "innovative atmosphere."

But communications networks are only one requirement of willingness for innovation. The economy also needs forms of organisation which facilitate the rapid exchange of technological developments within itself and continuous exchange of experience with the state research institutions. Technology transfer is called for.

The state government supports the establishment of technology parks. They are places where young entrepreneurs in particular can take advantage of opportunities to set up in business in the closest possible proximity to the large university research institutions. Joint projects in the economy, for instance such as those in the field of new information and communications technology, are further steps toward better co-operation and an intensive transfer.

The Centre for Innovation and Technology ("ZENIT") in Mülheim/Ruhr holds a special position. It grew up under the independent self-organisation of small business with participation of the credit economy and the state government. The centre is intended as a forum for entrepreneurs and managers, offering analyses and expertise and giving specific information.

"ZENIT" will later take over and carry on the duties of future promotion of industrial research and developments as a project sponsor. The centre will act as a consultant on technology policy to the state government and organise co-operation with other institutes from the economic sector and social groups.

In addition to spreading data networks and organising technology transfer, the provision of capital funding is the third important factor for an "innovative atmosphere".

"Venture capital" is the often-quoted keyword. Industry in North Rhine-Westphalia is not short of capital. The self-financing level for the extraordinary efforts in technology undertaken by the companies in our state stands at 90% at present.

If, despite the exceptionally high level of liquidity in companies, less cash than possible is flowing into the home economy, the reason lies in the fact that at present capital investment brings much higher yields than real investment due to the high exchange rate of the US dollar.

Willingness to take a risk among the population in North Rhine-Westphalia remains unbroken. Since 1975 we have had a strong increase in the surplus of registrations of new businesses. In 1983 the account stood at 25,000. The surplus of 11,000 registrations of new businesses in the first six months of 1984 makes it clear that neither "bureaucratic obstacles" nor "lack of capital" are factors to be taken seriously for the establishment of companies.

But there is a special capital requirement for newcomers to the market, who are faced with difficulties in taking up their starting opportunities. Many savings banks in our state have recognised this problem. With the support of the state government, they are putting forward special credit programmes and investment concepts. With new funding models such as these, they aim to provide venture capital both for newly-established businesses and the restructuring of existing companies. Last year, the Siegen Savings Bank, a publicly-owned credit institute in North Rhine-Westphalia, was the first institution of its kind to establish a "Venture Capital Fund". This is intended to help with the encouragement of new technologies and innovative products in the Siegerland, an industrial region rich in tradition in the southern part of North Rhine-Westphalia.

North Rhine-Westphalia is not only a region with a high cultural and leisure value together with a wealth of industrial background, but also the state with an especially experienced and well-qualified workforce.

Proud of his job—coal miner in the Ruhr area.

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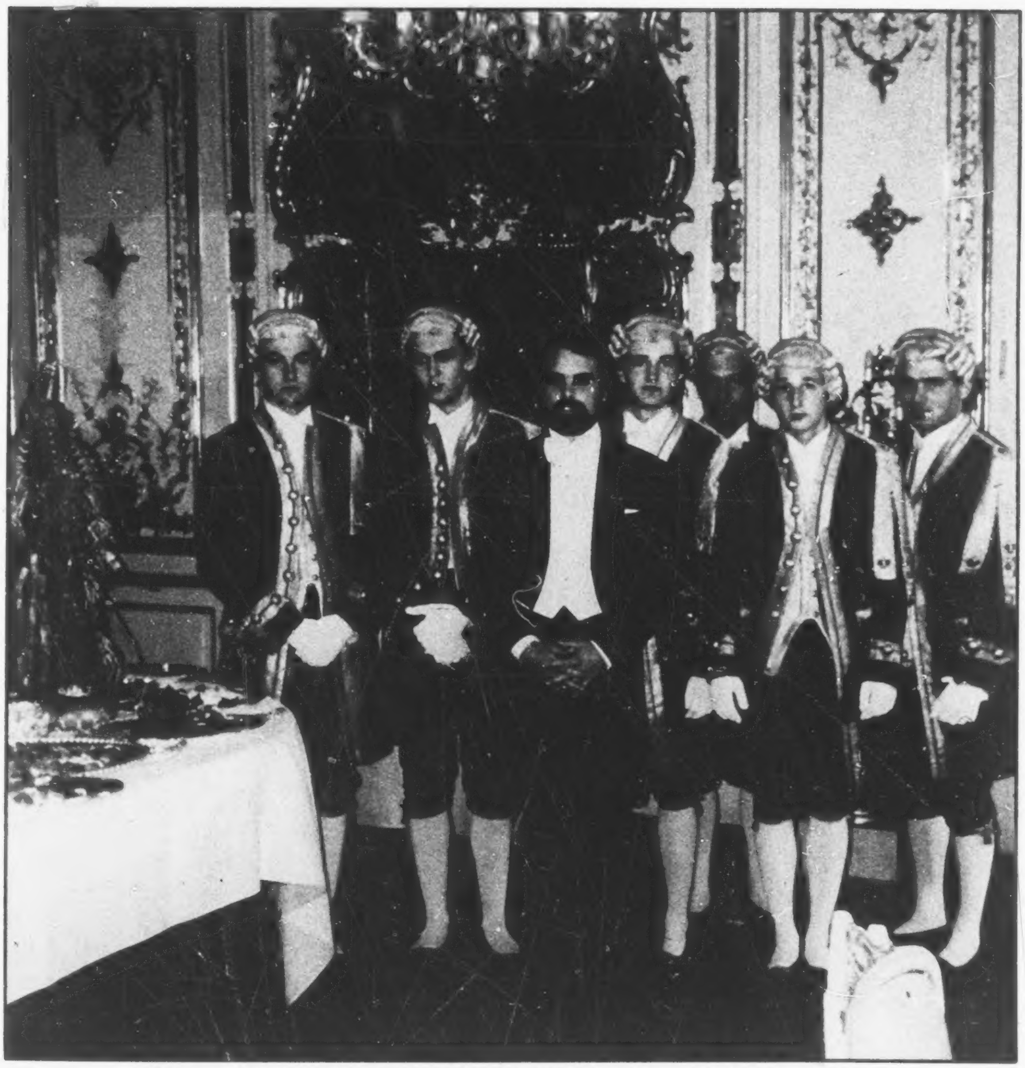

Waiting on tables at government receptions is part of the routine for 'Bavaria' students. The Wedding of a Bavarian Prince.

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US Companies of Bayer AG, Germany

in service to the American marketplace.

A historic partnership spanning nearly 120 years. That summarizes the role Bayer AG of West Germany has played in the United States, the world's largest and most challenging market.

Since 1865, only two years after the company was founded in the small town of Elberfeld, Bayer AG has been a viable part of U.S. industry and commerce. What began with a small dyestuff plant near Albany, New York, has grown into a $3.5 billion business based on close technical partnerships with many branches of industry, agriculture and the health-care field.

Today, six operating companies employing almost 25,000 people in more than 30 production facilities carry out Bayer AG's activities in the United States:

- **Agfa-Gevaert, Inc.** is a leading producer of photochemical and phototechnical products.
- **Miles Laboratories, Inc.** specializes in health-care products.
- **Mobay Chemical Corporation** manufactures specialty chemicals and systems.
- **Compugraphic Corporation** manufactures hardware and software for computerized typesetting systems.
- **Haarmann & Reimer Corp.** produces fragrances, flavors and aroma chemicals.
- **Helena Chemical Co.** is a major regional distributor of agricultural chemicals.

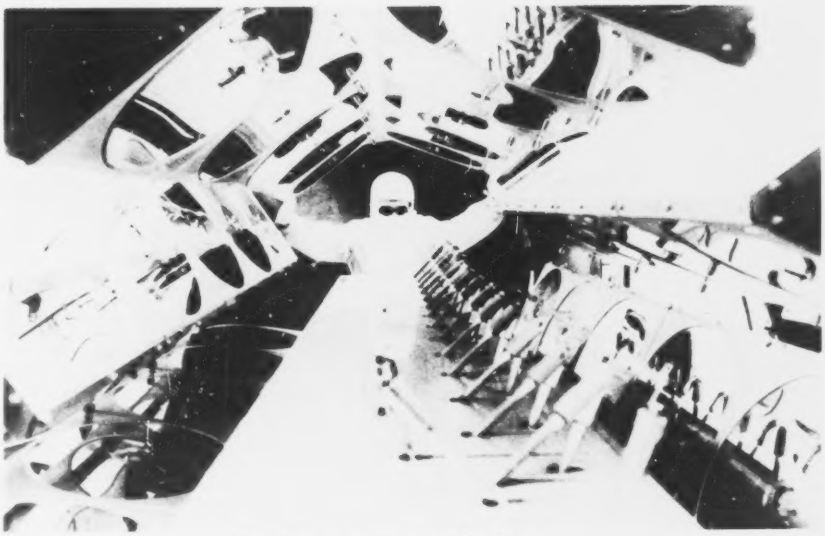
The highly diversified operations of these companies are a true reflection of the worldwide activities of Bayer AG. Combined, these U.S. companies represent more than 20% of Bayer AG's global business.

North Rhine-Westphalia is not only a region with a high cultural and leisure value together with a wealth of industrial background, but also the state with an especially experienced and well-qualified workforce.

The fact that technological advances not only create new jobs but also destroy others is known. Hitherto, the high level of growth and expansion in many areas has balanced out this type of job losses. But if, due to variations in the development of the world economy, growth slows down generally, this kind of balance will no longer be possible.

The road to the so-called Third Industrial Revolution must not become one for the few, only for those with the top potential, but it must be one that can be travelled by all who share in the economic process. The work force in North Rhine-Westphalia has proved that it was willing to make compromises. This social consensus is an important factor in favour of the location of production in North Rhine-Westphalia and one of the essential foundations on which the success of our economy in recent decades has been based. For this reason the "Technologies of the Future" programme has as one of its focal points research into ways of humanising work by the use of modern technologies.

Moreover, it will be necessary to distribute work more evenly than is the case at present. The structure of qualifications among the work force will have to be suitably adapted. Thus, they need more and earlier opportunities for information and participation in decision-making. This would assure a social climate conducive to an innovative atmosphere. And it is the climate, not the weather which is the consequence of short-term atmospheric developments, that determines the long-term opportunities for growth in a region. ■



Manufacturing of laser video discs.

DEUTSCHE ZUSAMMENFASSUNG

Ministerpraesident Johannes Rau betont in seinem Beitrag den starken Strukturwandel, den Nordrhein-Westfalen in den Nachkriegsjahren durchgemacht hat. Das bevoelkerungsreichste Bundesland, das lange Zeit als Synonym fuer die deutsche Schwerindustrie galt, habe sich zu einer modernen Industrieregion mit einer breit gefaecherten Branchenpalette entwickelt. So habe beispielsweise die chemische Industrie mit ihren hochentwickelten, stark automatisierten Produktionstechniken heute in Nordrhein-Westfalen den hoechsten Umsatz, gefolgt vom Maschinenbau, dem Nahrungs- und Genussmittelsgewerbe, der eisenschaffenden Industrie und der Mineraloelverarbeitung. Erst dann folge der Kohlebergbau, der lange Jahre das Bild des Landes gepraegt hatte.

Rau verweist darauf, dass die Zahl der

Zechen in seinem Land, die 1957 noch 140 betragen hatte, auf 25 im vergangenen Jahr gesunken sei. "Es gibt die so schlicht wie falsche Behauptung, die sogenannten Zukunftsindustrien haetten in Nordrhein-Westfalen keine Entfaltungsmoeglichkeiten", meint Rau. "Die Tatsachen sprechen dagegen:

—Die groesste Firma im Computerbau in der Bundesrepublik ist in Nordrhein-Westfalen.

—Von den sechs groessten deutschen Beratungsunternehmen im Bereich des Software sind drei in Nordrhein-Westfalen ansaessig.

—65% des Forschungspotentials aus dem Bereich der Informationstechnik aus der ganzen Bundesrepublik sind an Rhein und Ruhr angesiedelt.

—Die Bio- und die Gentechnologie haben an den Universitaeten in Koeln, Bielefeld, in Duesseldorf und bei der Kernforschungsanlage Juelich hervorragende Standorte.

—Hochschulforschung und ausseruniversitaere Forschungseinrichtungen fuer den Bereich neuer Werkstoffe sind in Nordrhein-Westfalen ueberdurchschnittlich besetzt und ausgestattet."

Der Politiker raeumt allerdings ein, dass auch Nordrhein-Westfalen noch Struktur- und Wachstumsprobleme habe. Aehnlich wie in anderen traditionellen Industrieregionen der Welt seien die Probleme seines Landes wegen der tiefgreifenden Strukturveraenderungen der Wirtschaft ueberdurchschnittlich gross. Deshalb wuerden im ganzen Land die Anstrengungen verstaerkt, technologische Fortschritte in neue Produkte und Produktionsverfahren umzusetzen.

"Es geht zum Beispiel darum, bei der Entwicklung neuer Werkstoffe an der Spitze zu bleiben", betont Rau. "Die Stahlindustrie muss ihre Marktchancen in wichtigen Bereichen wie der Kraftwerksindustrie, der chemischen und petrochemischen Verfahrenstechnik, dem Motor- und Turbinenbau auf Dauer erfolgreich nutzen. Es gilt aber auch, die Verbundwerkstoffe weiterzuentwickeln."

"Wir haben im Kunststoff- und im Faserherstellungsbereich, in der Metallindustrie mit entsprechenden Instituten und mit einer Vielzahl von Verarbeitern und Anwendern gute Voraussetzungen fuer solche Industrien", hebt der Regierungschef hervor.

Er habe auf Reisen in die USA eine Reihe von Modellen kennengelernt, mit denen in diesen Laendern die Spitzenforschung und deren Umsetzung in wirtschaftliches Handeln gefoerdert wuerden. Als besonders interessantes Modell nennt Rau die Anstrengungen von US-Gouverneur James B. Hunt in North Carolina. Dort seien im Research Triangle Park Unternehmen und Universitaeten auf hervorragende Weise raeumlich und organisatorisch einander zugeordnet. Die Erfahrungen in North Carolina beim praktischen Aufbau und der praktischen Gestaltung des Energiezentrums sollten nach Ansicht von Rau fuer den Aufbau von Technologieparks in seinem Land als Ausgangspunkt genutzt werden. In den kommenden Jahren wuerden zwischen Nordrhein-Westfalen Nachwuchs und Fuehrungskraefte ausgetauscht. Wissenschaftler beider Staaten wuerden darueber hinaus gemeinsam auf den Gebieten der Computer-Software, der Informatik, der Biomedizin und Gentechnologie, der medizinischen Technik, der Kernforschung, der Textilindustrie sowie fuer den Umweltschutz forschen. Gemeinsam wolle man auch neue Zulieferungsmoeglichkeiten, besonders fuer mittelstaendische Unternehmen, erschliessen und gemeinsam Grossprojekte angehen.

Auf die Leistungen seines Landes eingehend verweist Rau auf die erheblichen Anstrengungen, besonders in den Industriegebieten des Landes neue Universitaeten aufzubauen. Die Zahl der Stellen an den Hochschulen in Nordrhein-Westfalen seien von 1971 bis 1982 von rund 34.000 auf 54.000 gestiegen. Zehn Max-Planck-Institute, vier Fraunhofer-Institute und drei Grossforschungsanlagen rundeten die technologische Forschungspalette in Nordrhein-Westfalen ab.

Rau sieht ferner die Notwendigkeit, mehr innovative Atmosphaere und neue Organisationen und Managementformen zu entwickeln, damit sich Spitzenleistungen herausbildeten. Dazu muessten zum einen hervorragende Wissenschaftler angeworben werden und auf der anderen Seite ungewoehnliche Forschungsprojekte und vielversprechende neue Wege gefoerdert und zugleich in die Wirtschaft und in die Produktionsprozesse eingebracht werden.

"Staatliche Verantwortung fuer innovatives Klima liegt besonders in den Infrastrukturbedingungen, die bereitzustellen sind", betont Rau. Er verweist auf das Verkehrsnetz sowie auf die Versorgungs- und Entsorgungseinrichtungen, die in Nordrhein-Westfalen unvergleichlich gut seien. Fuer die forschungsintensive Wirtschaft und fuer alle Dienstleistungen halte er darueber hinaus den Aufbau eines modernen Informations- und Kommunikationsnetzes fuer unabdingbar. "Daten und Informationen rascher und umfassender zu uebertragen, zu verarbeiten und zu speichern als bisher wird ein wichtiges Wettbewerbskriterium." Wie gross der Bedarf nach solchen Einrichtungen sei, ergebe sich aus dem "Telekommunikations-Entwicklungsplan" seines Landes.

Einen besonderen Stellenwert misst der Ministerpraesident ferner der Einrichtung von Technologieparks fuer junge Unternehmer sowie Selbsthilfeorganisationen der Wirtschaft zur Foerderung von Innovation und Technik bei. Neben dem Ausbau von Datennetzen und der Organisation von Technologietransfer sei die Bereitstellung von Kapital die drittwichtigste Groesse fuer "innovative Atmosphaere". Dabei sei "Risikokapital" das vielgenannte Stichwort. Rau vertritt die Ansicht, dass es der Industrie in seinem Lande an Kapital nicht fehle. Die Selbstfinanzierungsquote fuer die ausserordentlichen technologischen Anstrengungen der Unternehmen des Landes laege derzeit bei 90%. "Wenn trotz der ausserordentlich hohen Liquiditaet der Unternehmen nicht so viele Mittel wie moeglich in die heimische Wirtschaft fliessen, liegt das daran, dass zur Zeit Kapitalanlagen wegen der hohen US-Zinsen weitaus renditefreudiger sind als Sachinvestitionen", meint Rau.

Insgesamt stellt der Politiker der Wirtschaft und der Bevoelkerung seines Landes ein gutes Zeugnis aus. Die Risikofreudigkeit der nordrhein-westfaelischen Bevoelkerung sei ungebrochen. Seit 1975 gaebe es in Nordrhein-Westfalen einen stark zunehmenden Ueberschuss an Gewerbeanmeldungen, der deutlich mache, dass weder buerokratische Hemmnisse noch Kapitalmangel ernstzunehmende Faktoren bei der Unternehmensgruendung seien.

Nach Meinung von Rau gibt es aber einen besonderen Kapitalbedarf fuer Marktneulinge. Diese haetten durch hohe Zinsen und strenge Kreditpruefungsbedingungen Schwierigkeiten, ihre Startchancen wahrzunehmen. Nordrhein-Westfalen unterstuetze deshalb neue Finanzierungsmodelle, wie sie von vielen Sparkassen derzeit erprobt wuerden. Als weiteren wichtigen Vorteil von Nordrhein-Westfalen nennt der Regierungschef die "besonderen Erfahrungen und qualifizierte Arbeitnehmerschaft"; die Arbeitnehmerschaft in Nordrhein-Westfalen habe bewiesen, dass sie hinsichtlich des technischen Fortschritts zu Kompromissen bereit sei. Dieser soziale Konsens sei ein "bedeutender positiver Produktions- und Standortfaktor fuer Nordrhein-Westfalen.

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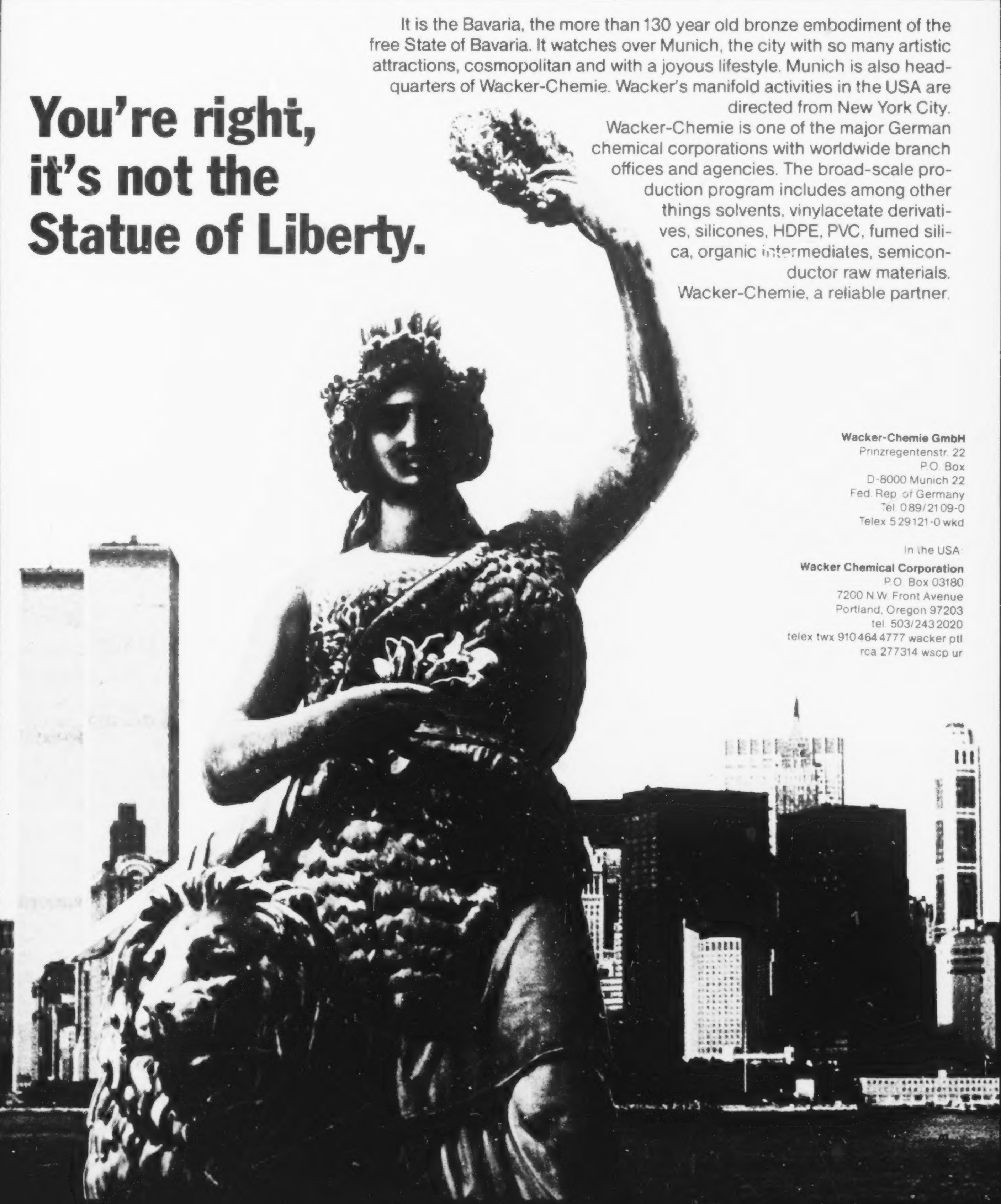

It is the Bavaria, the more than 130 year old bronze embodiment of the free State of Bavaria. It watches over Munich, the city with so many artistic attractions, cosmopolitan and with a joyous lifestyle. Munich is also headquarters of Wacker-Chemie. Wacker's manifold activities in the USA are directed from New York City.

Wacker-Chemie is one of the major German chemical corporations with worldwide branch offices and agencies. The broad-scale production program includes among other things solvents, vinylacetate derivatives, silicones, HDPE, PVC, fumed silica, organic intermediates, semiconductor raw materials.

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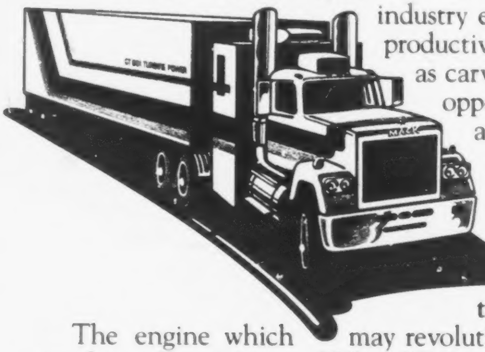

The first practical truck gas turbine.

The engine which may revolutionize trucking, Garrett's new 550hp GT601 gas turbine engine is a good example of how we can make an advanced concept practical.

Using a special exhaust heat regenerator, the GT601 delivers fuel economy similar to existing diesel engines—with only 1/10th the emissions! Our GT601 can also operate on a variety of alternative fuels (alcohol, kerosene, LPG, shale oil, etc.).

What's more, our GT601 is also a leading candidate to power improved versions of military tanks, armored personnel carriers, and other military vehicles.

The automotive engine of the future.

Today, Garrett and the American auto industry are hard at work in the Advanced Gas Turbine (AGT) program, funded by DOE/NASA contract.

Our goals? Almost 60 miles per gallon at highway cruise on diesel fuel, with the potential of up to 75 miles per gallon. Plus the ability to operate on either diesel, gasoline, alcohol or synthetic fuels.

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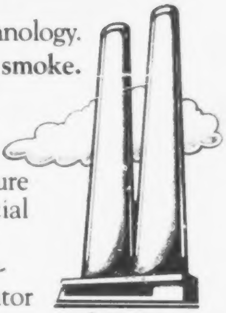

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How can you reduce the fuel requirement of an industrial furnace by more than 25%?

By putting the high temperature flue gas back to work with a special type of heat exchanger called a recuperator. Fitted inside the furnace exhaust stack, the recuperator channels heat back to the furnace to preheat incoming air—and reduce fuel consumption.

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The power behind 14 of today's leading business jets, Garrett's low-noise, low-pollution TFE731 turbofan engines offer the most fuel efficiency in their class. Up to 40% less fuel consumption than comparable turbojets. With over 4 million flight hours already logged, the TFE731 has already been selected to power the military trainers of four countries.

The list goes on and on. Everywhere you look, you'll find Garrett doing much the same thing: Having the initiative to develop more imaginative technology. Then knowing where to use it.

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High Tech: Ein vitaler Zweig im Spektrum der kalifornischen Wirtschaft

High Technology: A Vital Part of California's Economic Diversity

by George Deukmejian
Governor,
State of California

If California were a separate country it would rank 8th in the world in the production of goods and services. Some economic analysts believe it will be the world's 4th largest economic power by the turn of the century.

California has enjoyed more than a century of economic growth that began with the discovery of gold in 1849, followed in the 1860's by the construction of the Central Pacific Railroad that opened California to the east.

It was the beginning of a diversified economy that has given the state a prosperity unmatched in the nation. From agriculture to aerospace – manufacturing to medicine – banking to biotechnology, California is among the world leaders.

Our rich farmlands produce more food and fiber than any other state and we lead the nation in manufacturing. The state is the leading American market for wholesale and retail goods. The wide range of goods and services offered by California has placed us in the mainstream of international commerce.

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California is a major exporter of manufactured items and agricultural products. We are also a large growing market for goods imported from other countries.

Asia and Europe account for 82 percent of our world trade, 67.7 percent of that is with Asian countries. California ranks second only to the United States as Japan's leading trading partner. We sell her more than $7 billion worth of goods.

The consumer market offered by Asian countries is larger than the entire population of the U.S. with economic growth rates of 5 to 10 percent.

California is a pacesetter for the rapidly increasing volume of trade between the U.S. and the nations of the Pacific Basin. Our ability to send California products, and those of other states, to nations in this region certainly fuels our economy.

No other state and few countries are so strategically located to serve this area of international commerce. Our 11 major seaports and 9 international airports are increasingly busy handling this nation's trade with the world.

In this decade, California cities have replaced New York, Boston and Philadelphia as the growth centers for international trade.

But for all our firsts, we do not take prosperity and growth for granted. California is making a major effort to attract new business and encourage expansion.

Early in 1985, the California Department of Commerce, charged with the responsibility of creating jobs through economic development, will launch a vigorous $6.5 million dollar campaign to market California as a vacation and business site to target audiences throughout the United States and around the world. It marks the first time the state has ever allocated promotional funds for economic development.

But our efforts to build on the state's economic strengths were showing signs of success even prior to the marketing campaign. In the 18 month period from January, 1983 to July, 1984, California led the nation with 400 new major business expansions and locations. They generated 180,000 new jobs and $3.5 billion dollars in investment. The most recent national statistics also show that California continues to lead all other states in attracting foreign investment.

High technology, the newest star to brighten the state's economy, is an example of our commitment to business and industrial growth.

High technology, the newest star to brighten the state's economy, is an example of our commitment to business and industrial growth.

High tech was born of the same pioneering spirit that catapulted California into its first stage of economic development in the 1800's.

The first major breakthrough to usher in the electronics age actually occurred more than 70 years ago in the San Francisco Bay area community of Palo Alto when scientists developed the vacuum tube, the forerunner to the transistor.

And, in the 1940's there were more innovations that hastened the coming of a new era in economic development and electronics. A new breed of entrepreneurs began making history in aviation – men such as Donald Douglas, John Northrup, Howard Hughes and the Lockheed brothers. Their dreams gave the nation wings and put Southern California on the map as the nation's top aerospace and electronics center.

Researchers taught new scientists and engineers. And, California's great universities and colleges attracted the minds that opened the gateway to the future.

The high tech building blocks were in place in the 1960's and 70's when the new generation of scientists and engineers brought to reality their concepts in computer technology.

Venture capitalists were among the first to recognize the potential of these new enterprises and together they launched a technological revolution spawning rapidly growing companies that thrust California to the forefront of high technology.

Venture capitalists were among the first to recognize the potential of these new enterprises and together they launched a technological revolution spawning rapidly growing companies that thrust California to the forefront of high technology.

The birthplace of this new era of California innovation became known as Silicon Valley. Ironically, Palo Alto, where the vacuum tube made its debut in the early part of the century, is in the heart of the region.

The success story spread quickly. Silicon Valley became a household word. It attracted worldwide interest and etched "high tech" in the California memory bank of economic giants along with agriculture, manufacturing and aerospace.

But it was too big, too adaptable to be confined to just one Silicon Valley. California's diverse regions – from the Sierra Nevada foothills, to valley communities, to coastal cities – offered excellent locations for high tech facilities.

Plants began springing up in new areas and some Silicon Valley companies added to the diversification by establishing branches in various communities in the state.

Today, California has about 15 high tech "hot spots" from Redding in the North to San Diego in the South.

In Los Angeles County alone, nearly a thousand high tech firms employ more than a quarter of a million people. It is the second largest electronics community in the nation, larger than those in New York and Massachusetts. Sixty percent of California's high tech employees work in Los Angeles County.

Another 1,000 companies have facilities in Orange and San Diego Counties. And, the State Capitol of Sacramento also is among the cities attracting many new high tech entrepreneurs and production facilities.

California leads all other states in the growth of new high tech regions and commands 30 percent of the nation's workforce in this field.

The computer industry is the largest and fastest growing segment of the state's economy with more than $16 billion in sales forecast for 1984.

It is a success story, not only for the computer hardware manufacturers, but for the software firms as well. Six of the nation's ten largest companies producing software for personal computers are located in California.

The semiconductor industry is another major element of high tech economy. More than half the firms in the U.S. Semiconductor Industry Association are located in California. It's estimated that Silicon Valley companies control about 20 percent of the world semiconductor market projected to top 26 billion dollars in 1984.

California firms also are a recognized force in the production of computer peripherals such as display terminals, printers, floppy and hard disk drives.

We are confident California companies will continue to hold the edge in high technology productivity and job creation. It's estimated the state will capture 40 percent of the projected growth in technical positions in the U.S. computer industry between 1983 and 1987.

This administration believes education is a key to continued leadership in this rapidly changing industry. I have no doubt, our great educational system will meet the challenge.

This administration believes education is a key to continued leadership in this rapidly changing industry. I have no doubt, our great educational system will meet the challenge.

California has some of the largest and most respected colleges and universities in the world. The University of California faculty includes 15 winners of Nobel Prizes and more than 200 members of the National Academy of Sciences. That's more than any other college or university system. In 1984, the University of California faculty accounted for 13 percent of the new members elected to the American Academy of Arts and Sciences.

The science and engineering departments of our colleges and universities are the best in the nation:

– Stanford University leads in computer sciences.

– Cal Tech in Pasadena is number one in physics, chemistry, geology and cellular and molecular biology.

– The University of California at Berkeley, the top graduate school in the nation, is a leader in civil engineering.

The University of California has developed the MICRO program, a special business/academic partnership for microelectronics research on University of California campuses. The program is funded jointly by industry and state government. Our 1984-85 budget includes a $2 million increase in funds for the MICRO program. And many companies are working with our institutions on special research and development projects.

Federal research and development spending in California totals some $8 billion and there are more industrial research labs here than in any other state.

Our extensive community college system also is active in high tech related education, providing technical training in such skills as word processing, electronics and accounting.

My administration has increased funding across the board for education with a multibillion dollar increase in funding from grammar school to graduate school.

The state's community colleges will receive $26 million to support technical training programs. At the State University level, $17.4 million has been added to fund technical staff, additional equipment and computing time.

In addition, California offers a one-of-a-kind program to assist dislocated workers learn new skills and meet the human resource needs of new and expanding companies. The California Employment Training Panel retrains workers to industry requirements. In the first six months of operation, thousands of Californians learned new job skills and 60 percent of them have already obtained steady employment.

It has been said that many people who invest in the future of California do so because they cannot afford not to. Capital is easier to acquire because investors want to be involved in this thriving market.

It has been said that many people who invest in the future of California do so because they cannot afford not to. Capital is easier to acquire because investors want to be involved in this thriving market.

Since the late 1950's venture capitalists have been taking the risks that transformed concepts into fast growing companies. Their efforts helped produce a long list of prominent high tech names from Apple Computer to Intel Corporation.

Today these venture capitalists invest more than $500 million annually in California. That's eight times as much as Texas and twice as much as Massachusetts. It represents 35 to 40 percent of the venture capital money raised in the United States.

There are approximately 500 U.S. venture capital investment firms. Nearly 100 of those are located in California.

Although some concern has been voiced recently that the venture capital field has grown too rapidly, the state's pool of experienced, well-established venture capitalists is dedicated to building companies by being there when they're needed to provide advice and guidance.

In addition to its venture capital resources, California is second only to New York as a leading financial center. Our banks lend more than 130 billion dollars to business – more than

Texas, Massachusetts, North Carolina and Florida combined.

Five of the top 15 national banks are in California. There are 361 chartered banks with more than 4,500 branches. Many California banks have offices overseas and more than 100 foreign banks maintain offices in California adding another dimension to investment and international trade transactions.

The top five savings and loan institutions in the United States are located in California. We boast a total of 171 savings and loan associations with assets totaling 153 billion dollars.

The State of California offers a number of excellent programs to help firms locate or expand here:

– The Industrial Development Bond Program which has been used by both high tech and basic manufacturing firms opening new facilities or expanding, authorizes counties and cities to offer low interest financing through the use of tax-exempt industrial development bonds.

– The Pollution Control Financing Program makes tax exempt financing available to companies with air or water pollution abatement facilities or with projects for conversion of waste to energy.

— California Innovations Development Loan Program offers direct loans to small businesses to assist in the development of new technologies.

– The Small Business Loan Guarantee Program offers direct loans to small businesses to assist in the development of new technologies.

– The Small Business Loan Guarantee Program offers loan guarantees to firms unable to secure conventional financing. The loan guarantee program is available through five regional development corporations established by the state.

The California Department of Commerce is working with companies at home and abroad on these and other economic development programs designed to help large and small companies become a part of the California business community.

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I am proud to serve as Governor of California during this exciting time of growth, expansion and planning. This administration is committed to the future. We are building on our accomplishments to achieve our goal of providing all Californians an opportunity to enjoy rich and rewarding lives through economic expansion, education and innovation.

Just as the Central Pacific Railroad opened California to the east 125 years ago, high technology has opened the door to new opportunities.

By the year 2004, it's estimated our market will reach $1.4 trillion, four times as much as today's.

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DEUTSCHE ZUSAMMENFASSUNG

Kalifornien, an der sonnigen Westkueste der USA, kann heute auf mehr als ein Jahrhundert wirtschaftlichen Wachstums zurueckblicken, betont der kalifornische Gouverneur Deukmejian. Eingesetzt habe der wirtschaftliche Aufschwung des Landes mit den ersten Goldfunden im Jahre 1849. Ein weiterer wichtiger Schritt sei dann die Oeffnung Kaliforniens nach Osten durch den Bau der zentralpazifischen Eisenbahn gewesen. Deukmejian sieht darin den Startschuss fuer den amerikanischen Bundesstaat auf dem Weg zum "achtgroessten Industrieland der Welt".

Von der Landwirtschaft bis zum Flugzeugbau, von der Medizin bis zur Biotechnologie, im Bankwesen oder im Bereich der Hochtechnologie sei Kalifornien heute ueberall in der Weltspitzengruppe vertreten. Kalifornien sei auch fuer den amerikanischen Markt von grosser Bedeutung. In seinen Aussenbeziehungen zu den Laendern des pazifischen Beckens habe Kalifornien fuer die USA wichtige Dienste geleistet.

Deukmejian macht zugleich aber klar, dass sich Kalifornien nicht auf seinen Erfolgen ausruhe. Allein in den 18 Monaten von Januar 1983 bis Mitte 1984 habe es in Kalifornien 400 grosse Firmenerweiterungen oder Neuansiedlungen gegeben, durch die etwa 180.000 neue Arbeitsplaetze geschaffen worden seien.

Eine besondere Rolle in der neueren kalifornischen Geschichte nimmt nach Darstellung des Gouverneurs das Silicon Valley ein. Das Silicon-Tal sei inzwischen zum Synonym fuer Hochtechnologie geworden. Inzwischen habe sich der high-tech-Bereich aber

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auch auf zahlreiche andere Regionen in Kalifornien ausgebreitet. Diese Silicon-Firmen haetten woanders Zweigniederlassungen gegruendet. Wie Deukmejian sagt, hat Kalifornien heute etwa 15 high-tech Schwerpunkte. Allein im Gebiet Los Angeles seien nahezu 1.000 Firmen dieses Sektors beheimatet, die etwa 250.000 Menschen beschaeftigten. Weitere 1.000 Firmen haetten Betriebsstaetten in den Bezirken Orange und San Diego.

Heute sind nach Angaben des Gouverneurs etwa 30% aller kalifornischen Arbeitskraefte im Bereich der Zukunftstechnologie taetig. Die Computer-Industrie sei der am schnellsten wachsende Wirtschaftsbereich im Lande.

Eine wichtige Quelle fuer den wirtschaftlichen Erfolg seines Landes sieht Deukmejian in qualifizierten Erziehungsprogrammen und in der Foerderung des Nachwuchses. Seine Regierung sehe in solchen Massnahmen den Schluessel fuer die Fortsetzung der kalifornischen Fuehrungsrolle in der Computer-Industrie.

In diesem Zusammenhang verweist der Gouverneur darauf, dass sein Land heute mit die groessten und meistgeachtetsten Universitaeten der Welt habe. So habe beispielsweise die Universitaet von Kalifornien 15 Nobelpreistraeger.

Aber nicht nur der Staat sei ein wichtiger Motor fuer die Zukunftsentwicklung des Landes. Auch die Privatwirtschaft unterstuetze die Entwicklung durch die Bereitstellung von entsprechendem Risikokapital. Zur Zeit wuerden jaehrlich mehr als 500 Millionen Dollar an Venture Capital in Kalifornien investiert. Dies sei achtmal soviel wie in Texas und zweimal soviel wie in Massachusetts. Fuenf der groessten amerikanischen Banken seien in Kalifornien beheimatet.

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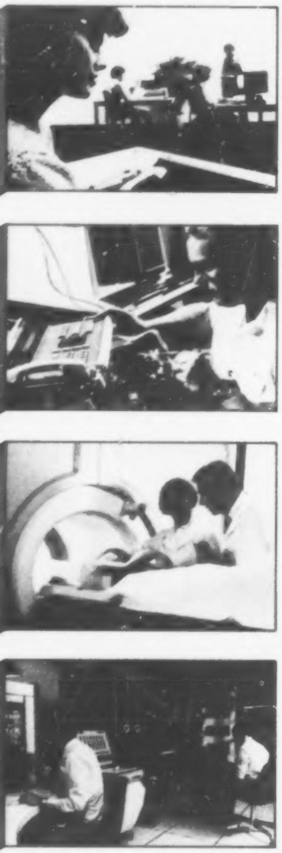

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Baden-Wuerttemberg treibt Zukunftstechnologien voran

Baden-Wuerttemberg Promotes Future Technology

by Lothar Spaeth
Governor of the
State of Baden-Wuerttemberg

Baden-Württemberg today occupies a leading position in the Federal Republic of Germany as regards its economic strength. This state in the south-west of the Federal Republic is poor in natural resources, and so this success did not just fall into its lap. Yet it has become one of the most important industrial regions in the country, thanks to the diligence, tenacity, thrift, modesty, and inventiveness of its inhabitants, as well as to a happy combination of private and public initiative in the business sector.

In terms of its economic efficiency, its degree of industrialization, and its research capacity, Baden-Würtemberg tops the league of industrial regions in the Federal Republic and has by far the lowest level of unemployment.

Even so, as a state which is heavily dependent on exports, we have to take into account the changes in the structure of the world economy, international shifts in the division of labor, and the economic dynamism of the "threshold countries."

The close links between Baden-Württemberg as an industrialized and technologically oriented state on the one hand and the world economy on the other led us to the conclusion which finds its expression in the overall concept of our eocnomic, technological and research policy.

Baden-Württemberg is distinguished by the fact that it has a good infrastructure and, in addition to large and efficient corporations, an especially strong medium-sized industrial sector, as well as sound and reliable craft businesses. Together with our scientists and businessmen, we aim to create conditions which will enable us not merely to react to the technological restructuring which is now taking place, but to be actively engaged in molding this development. We will thus be in a position to promote international trade and contribute to the development of emergent nations.

Since it is likely that ever more countries will become capable of building up manufacturing facilities of their own, our industries will have to adapt to this development with new products and methods.

In particular, it will be necessary to develop high-quality products and processes, capable of satisfying the different requirements of individual countries.

> **Since it is likely that ever more countries will become capable of building up manufacturing facilities of their own, our industries will have to adapt tc this development with new products and methods.**

Moreover, we see in these future-oriented technologies an opportunity to help conserve raw materials, and to improve the quality of life at work.

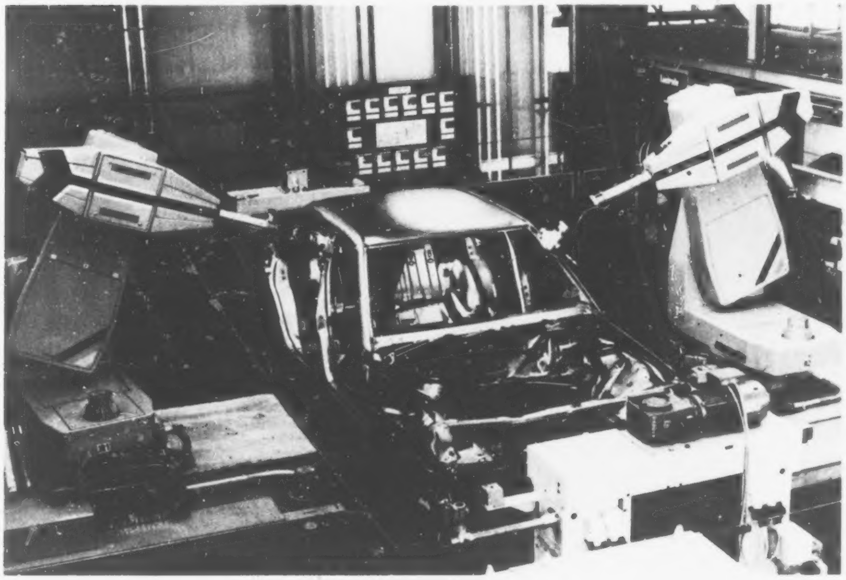
We aim to support the trends that become ap-

Stuttgart-Untertuerkheim production facility with central headquarters.

parent as a result of new research and development projects. In tnis connection the policy adopted can help improve general conditions, and close cooperation between scientist and practical businessmen will generate impulses to new creativity, with more versatile and individual manufacturing systems.

For this reason scientific discoveries, e.g., in sensor, laser, or materials technology, in microelectronics should be translated into action without delay. This in turn requires more application-oriented research, the founding of new enterprises, an improvement in access to markets and export opportunities, in particular for small and medium-sized companies. The speed at which such companies are capable of adapting and their versatility as regards products manufactured offer the best conditions for

Daimler-Benz flexible chassis measurement station using 2 industry robots with 8 moving axes. Each provides accuracy not possible with previous measuring devices.



rapid exploitation of the transfer potential.

In order to practice a policy of improving research and expanding technology transfer, there has to be sufficient room to maneuver within the state's fiscal policy.

In order to practice a policy of improving research and expanding technology transfer, there has to be sufficient room to maneuver within the state's fiscal policy.

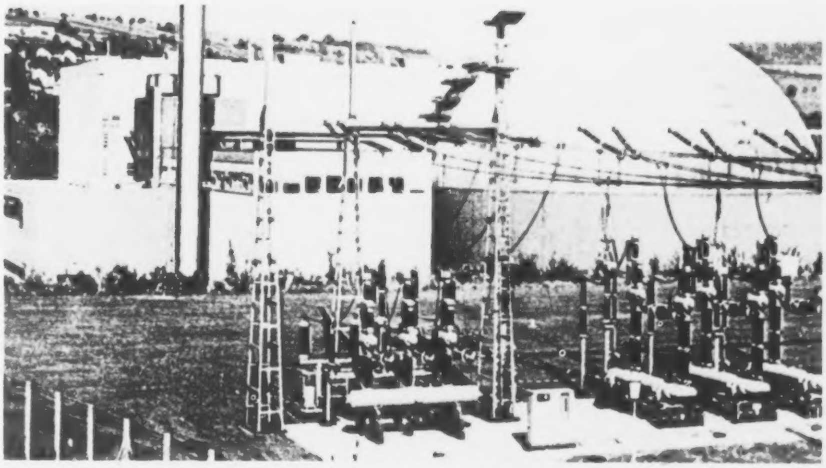
Baden-Württemberg's budget has been consolidated, and the necessary flexibility created, to enable our research capacities to be increased in key areas. In addition to microelectronics and biological engineering, research centers have been set up, or new research institutions are to be established, in materials technology, production and process engineering, and in environmental and energy technology.

There also exists a detailed information and technology transfer system, intended specifically to help small and medium-sized businesses keep up with the latest developments in technology even though they cannot afford heavily staffed research departments. These institutions are being used increasingly by young, qualified master craftsmen, engineers and research scientists wishing to put their ideas – including some patented ones – into practice. We should give special consideration to such people, who develop new products and methods, and who want to start up their own businesses. New technology centers now being set up should provide the necessary business management infrastructure.

Bureaucratic and financial obstacles will thus be reduced, so that the entrepreneur can concentrate on his project and, working together with researchers and practical businessmen, put his know-how into effect.

The availability of sufficient risk capital for innovations is a major consideration in this context. We believe that in the world-wide technology contest a country's performance will depend to a large extent on its potential for innovation. Therefore the means of making capital available for high-risk but promising inventions, developments, production methods and products must be expanded. In view of the special risks involved, investments in new technologies call for special financing instruments outside the usual scope of banking services.

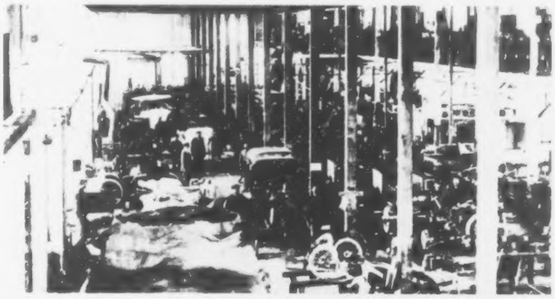
With the new technologies in particular, the financing of the material investments is accompanied by a considerable finance requirement for know-how, and conventional criteria for the granting of loans or participating in the enterprise are inadequate for this. Equity capital can be raised via holding companies. We therefore believe that a 'partnership' between the investors, banks and private individuals on the one hand and the commitment of private business on the other represents a promising possible solution. Linking potential in terms of expertise to management experience in this way generates vital stimuli to innovation in the business sector. ■



The nuclear power station in Obrigheim/Baden-Wuerttemberg.

New technology centers now being set up should provide the necessary business management infrastructure.

Automobile assembly line in the past and today.



DEUTSCHE ZUSAMMENFASSUNG

Ministerpraesident Lothar Spaeth schreibt u.a.: "Die Spitzenstellung, die Baden-Wuerttemberg heute hinsichtlich seiner Wirtschaftskraft in der Bundesrepublik Deutschland einnimmt, ist dem an Bodenschaetzen armen Land im Suedwesten der Bundesrepublik nicht in den Schoss gefallen. Dieses Land ist mittlerweile zu einer der wichtigsten Industrielandschaften geworden. Dies verdankt es dem besonderen Fleiss, der Ausdauer, der Sparsamkeit, der Bescheidenheit und der Erfindungsgabe seiner Bewohner ebenso wie einer gluecklichen Verbindung von privater und oeffentlicher Initiative im wirtschaftlichen Bereich.

Baden-Wuerttemberg liegt hinsichtlich der wirtschaftlichen Leistungsfaehigkeit, der Industriedichte, der Forschungskapazitaet an der Spitze der Industrielandschaften in der Bundesrepublik und hat mit Abstand die niedrigste Arbeitslosenquote.

Als besonders exportintensives Land haben wir jedoch dem weltwirtschaftlichen Strukturwandel, den Verschiebungen der internationalen Arbeitsteilung und der wirtschaftlichen Dynamik der Schwellenlaender Rechnung zu tragen.

Die Folgerung, die wir aus der engen weltwirtschaftlichen Verflechtung des Industrie- und Technologielandes Baden-Wuerttemberg ziehen, leitet ueber zu unserem Gesamtkonzept der Wirtschafts-, Technologie- und Forschungspolitik . . .

Wir wollen die erkennbaren Trends, die sich aus neuen Forschungs- und Entwicklungsprojekten ableiten lassen, unterstuetzen. Die Politik traegt hier zu einer Verbesserung der Rahmenbedingungen bei, und durch enge Zusammenarbeit zwischen Wissenschaft und Praxis ergeben sich Anstoesse fuer eine neue Kreativitaet der flexiblen und individuellen Produktionssysteme.

Deshalb ist die rasche Umsetzung wissenschaftlicher Erkenntnisse z.B. der Sensor-, Laser- oder Werkstofftechnik, der Mikroelektronik, erforderlich. Dazu bedarf es der Staerkung der anwendungsorientierten Forschung, der Gruendung neuer Unternehmen, der Verbesserung der Marktzugangs- und Exportchancen gerade der kleinen und mittleren Betriebe. Ihre Anpassungsdynamik und ihre Produktionsflexibilitaet bieten die besten Voraussetzungen fuer eine zuegige Nutzung des Transferpotentials.

Fuer die Politik der Forschungsverbesserung und den Ausbau des Technologietransfers ist jedoch ein ausreichender Spielraum im Rahmen der staatlichen Finanzpolitik erforderlich. Deshalb wurde der Haushalt des Landes Baden-Wuerttembergs konsolidiert und die notwendige Flexibilitaet geschaffen, um unsere Forschungskapazitaeten schwerpunktmaessig ausbauen zu koennen.

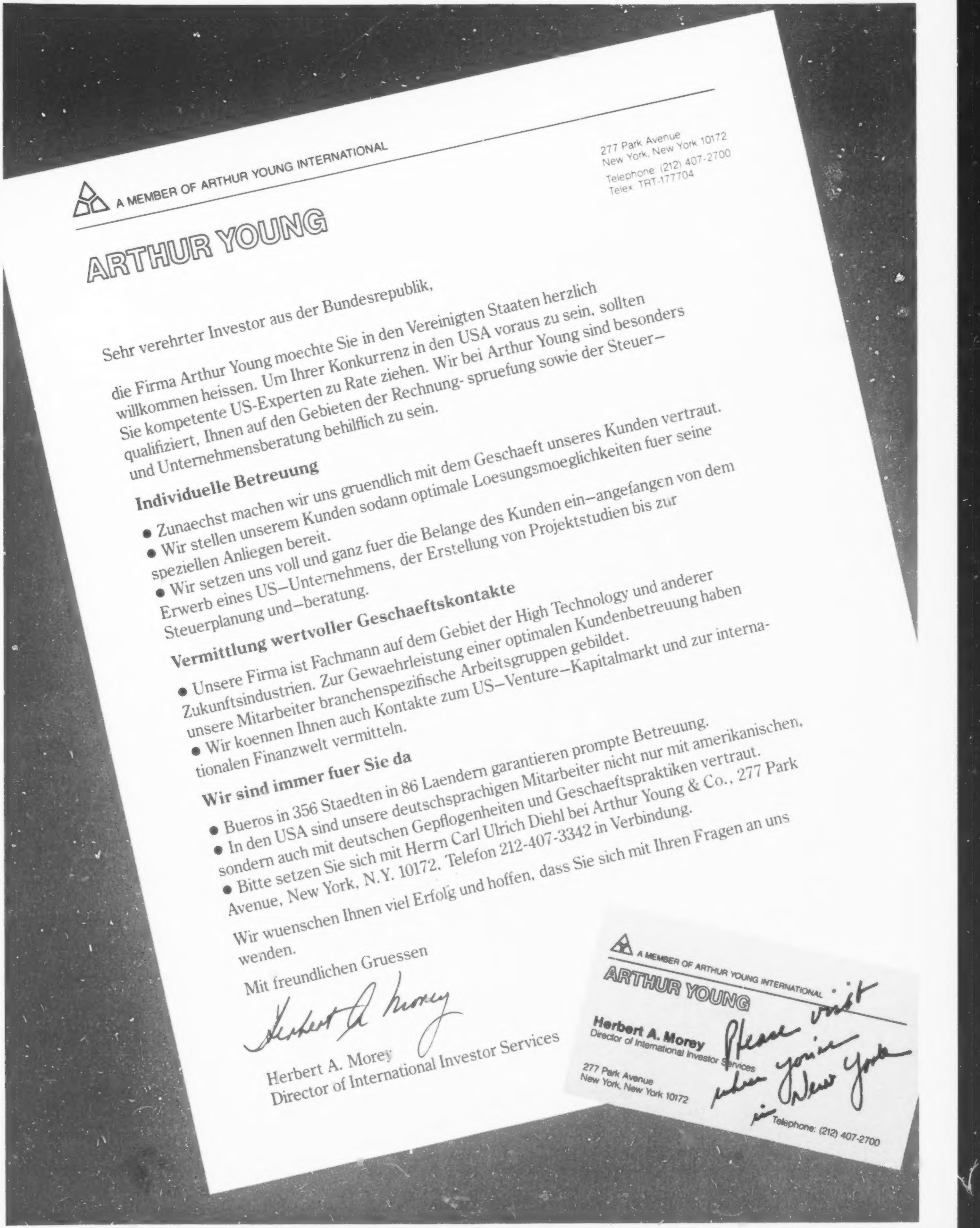
Ueber die Mikroelektronik und Biotechnologie hinaus sind in der Werkstofftechnik, der Produkt- und Verfahrenstechnik, sowie in der Umwelt- und Energietechnik Forschungsschwerpunkte gebildet worden oder werden neue Forschungseinrichtungen aufgebaut.

Darueber hinaus besteht ein detailliertes Informations- und Technologietransfersystem, das gerade die mittelstaendischen Unternehmen, die sich keine personalintensive Forschungsabteilungen leisten koennen, an den neuesten Stand der Technologie heranfuehrt. Diese Einrichtungen werden zunehmend von jungen qualifizierten Meistern, Ingenieuren und Forschern in Anspruch genommen, die ihre Ideen oder auch bereits ihre Patente einsetzen wollen. Solchen Leuten, die neue Produkte und Verfahren entwickeln und sich selbstaendig machen wollen, gilt unser besonderes Augenmerk. In der Managementberatung und der Informationsberatung soll in den im Aufbau befindlichen Technologiezentren die betriebswirtschaftlich notwendige Infrastruktur zur Verfuegung gestellt werden. Damit werden buerokratische und finanzielle Hindernisse abgebaut, so dass der Unternehmer sich weitgehend auf sein Vorhaben konzentrieren kann und mit Forschern und Praktikern zusammen sein Know-how einsetzen kann.

Eine besondere Deutung hat in diesem Zusammenhang die ausreichende Bereitstellung von Risikokapital fuer Innovationen. Wir sind der Auffassung, dass im weltweiten Technologiewettbewerb die Positionen eines einzelnen Landes wesentlich vom Innovationspotential bestimmt werden. Deshalb muessen die Moeglichkeiten gestaerkt werden, Kapital fuer risiko- und zugleich chancenreiche Erfindungen, Entwicklungen, Produktionsverfahren und Produkte bereitzustellen. Investitionen in neue Technologien verlangen wegen der besonderen Risiken besondere Finanzierungsinstrumente, die ueber den ueblichen Bankbereich hinausgehen . . .

Die Mobilisierung von Beteiligungskapital kann gerade ueber Beteiligungs- und Fondsgesellschaften erfolgen. Eine erfolgversprechende Moeglichkeit sehen wir deshalb im partnerschaftlichen Einvernehmen zwischen den Kapitalgebern, den Banken und Privatleuten einerseits, sowie dem Engagement der privaten Wirtschaft andrerseits.

Die enge Verknuepfung des Wissenspotentials mit den Managementerfahrungen liefert so entscheidende Impulse fuer den wirtschaftlichen Innovationsprozess."



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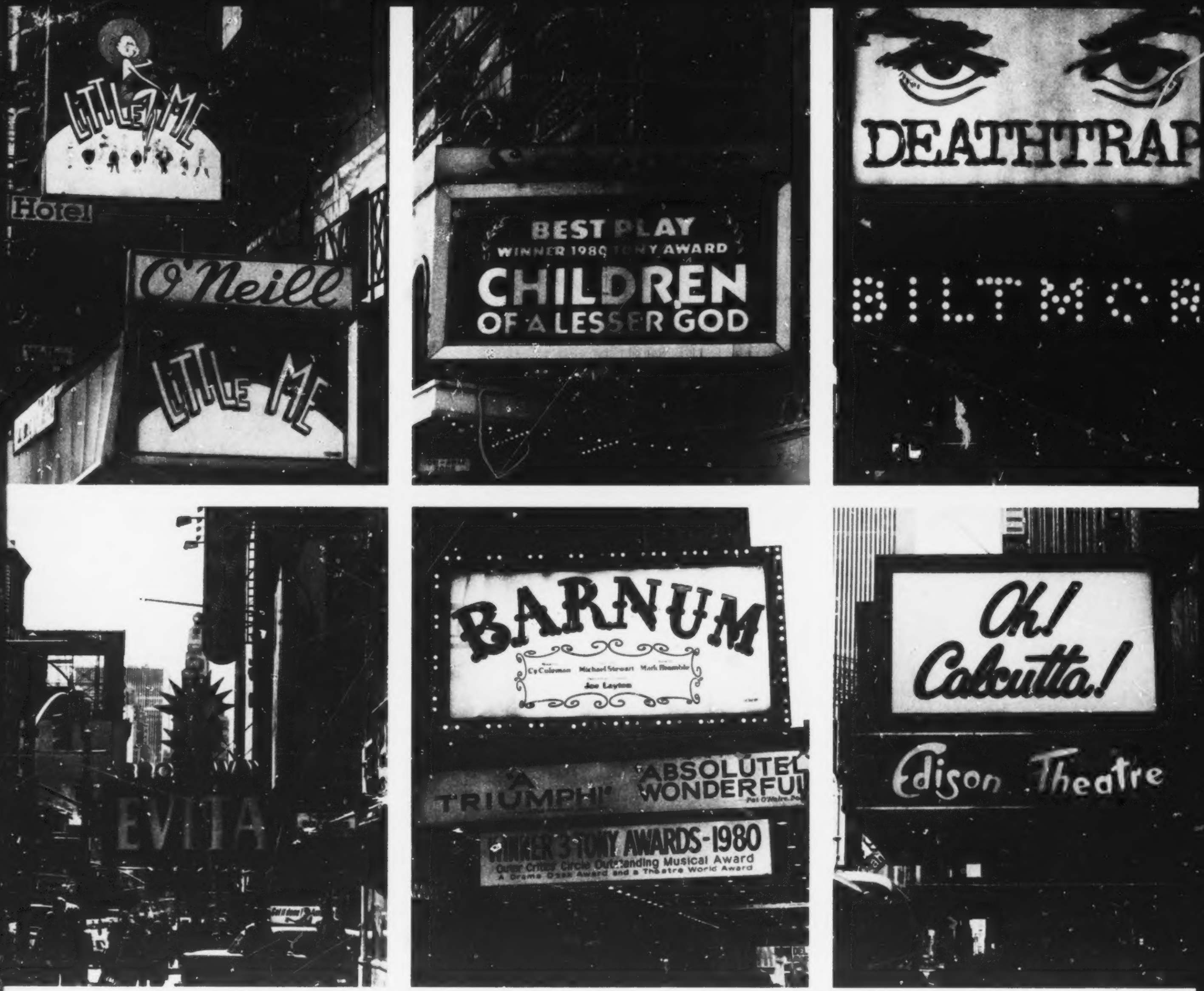

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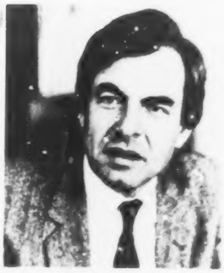
Technological Modernization and Risk Capital in Berlin



by Elmar Pieroth
Minister of Economics and Transportation of the State of Berlin

The developments in many industrialized countries show that structural crises can best be solved on a regional basis by promoting modernization of regional economies in a timely and results-oriented manner.

The Berlin Senate, the state and city government of Berlin, is pursuing a market-oriented structural development policy with the goal of supporting innovation in existing companies and establishing new, primarily technological enterprises.

West Berlin has an area larger than Stuttgart and Frankfurt combined and produces a gross income of DM 60 billion per year, almost half as much as the total GNP of Denmark or Austria.

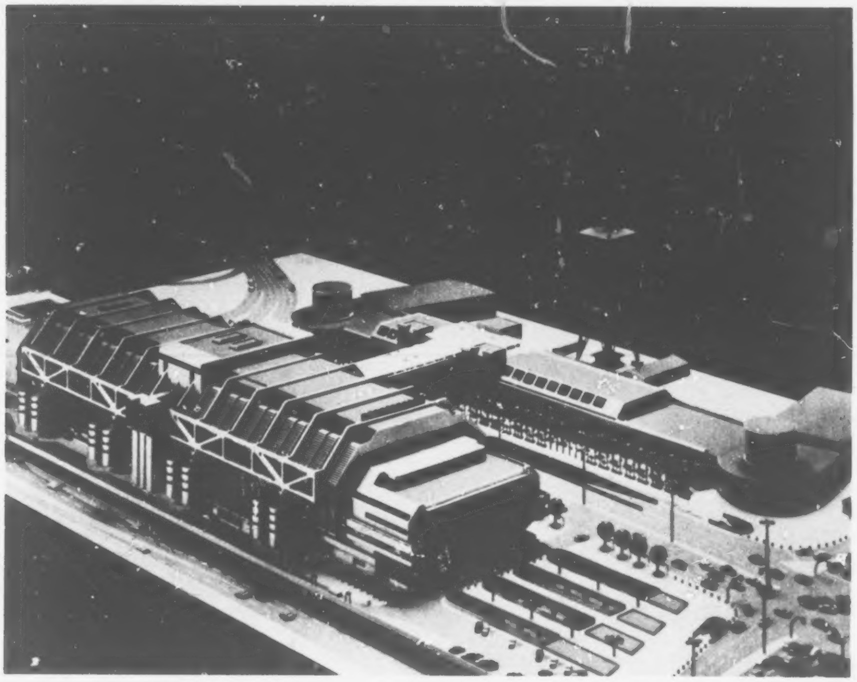
The advantage in Berlin is the close interconnection between science and commerce. With its 180 university and private institutes, Berlin has numerous first class research establishments, and more than 37,500 persons are scientists in technical and technological research and development. We practice technology transfer by bringing science and commerce closer together. In addition, we have been able to attract private investors to finance new technologies by making venture capital available. One important step toward the goal of transforming Berlin into a center for future industries is the facilitation of market entry for newcomers.

Berlin has numerous first class research establishments and more than 37,500 persons are scientists.

Young entrepreneurs receive advice, opportunities for cooperation and technical and manpower assistance under one roof.

The Berlin Center for Innovation and Start-up Enterprises, the first of its kind in the Federal Republic, in cooperation with the Technical University of Berlin, has made it possible for hi-tech-oriented companies to accelerate the transformation of research results into new products. Young entrepreneurs receive advice, opportunities for cooperation and technical and manpower assistance under one roof.

Shared facilities, such as secretarial and telephone service and conference rooms, are made available and billed according to use. In the meantime, 18 newly founded enterprises with 55 employees are successfully engaged in such projects as the manufacture of robots and the development of hydraulic systems and of soft-



Modern architecture and a symbol that is rich in tradition.

ware for word processing and biochemistry.

Because the demand for additional space is so great, a technology and research park will be constructed close to the Center, modelled on the successful American science parks. The emphasis here will be on cooperation between small and medium-sized firms, big industry and the Technical University in the following areas:

Microelectronics/Computer Science
Genetic Technology/Biotechnology
Structural Engineering/Reinforced
Concrete Construction
Traffic Engineering
Machine Tool Production

So far 15 companies and 14 research institutes plan to work at the Center with the objective of transferring research results into modern production techniques and new products.

The Technology Park should make an effective contribution to our regional, future-oriented economic policy.

The park will be an instrument for gathering impulses from science and making these usable for commerce. Conversely, it will serve as a clearing house for transmitting information from the marketplace to the research and development community.

A project started in 1982 called "Innovation Assistant" is promoting technology transfer through the interchange of personnel. So far we have placed 130 university graduates with small and middle-sized enterprises which had previously not employed any engineers or business administration graduates. They are applying the latest knowledge from the universities and strengthening the innovative capabilities of the enterprises, primarily in electronics, machinery and tool manufacturing, and in the production of data processing hardware and software.

Since 1978 the Technology Referral Agency (Technologie-Vermittlungs-Agentur) has been devoted to the technological modernization of Berlin's medium-sized enterprises. Extensive participation in the Agency by business and trade associations has made possible broad, practical consultation services for the more than 500 firms and individuals who have sought help.

The Technology Center of the Association of German Engineers specializes in the area of microelectronics. It is active throughout the Federal Republic of Germany and offers services to enterprises, including information gathering, consulting on technology, innovation and financial assistance, as well as assistance in making applications, supervision and execution of projects. In addition, a user-oriented microelectronics service with emphasis on "design of customer specific integrated circuits" is offered.

In cooperation with the Prognos AG and the Berlin Economic Development Corporation, expert task forces assist existing Berlin enterprises and others interested in moving here to gain access to growth markets in high technology. Traffic, environmental concerns and com-

The Technology Park. . .will serve as a clearing house for transmitting information from the marketplace to the research and development community.

Corporate strategic decisions for transforming research results and patents into new and improved products are to be promoted.

munication technologies represent the initial areas of action for the task forces.

Corporate strategic decisions for transforming research results and patents into new and improved products are to be promoted.

A significant starting point for the development of new technologies in the area of communication is the pilot cable project planned for Berlin. A company for the installation and operation of the cable center has already been established. In addition, the German Postal Service, which also controls telephone communications, plans to establish an integrated digital telephone network; negotiations for early installation are currently underway.

Within the area of traffic engineering, a magnetic rail system is being tested at a demonstration facility in Berlin. This ecologically attractive and energy-saving means of local transportation could become one of Berlin's most promising export articles for the entire world market due to its highly advanced technology and its low cost advantages.

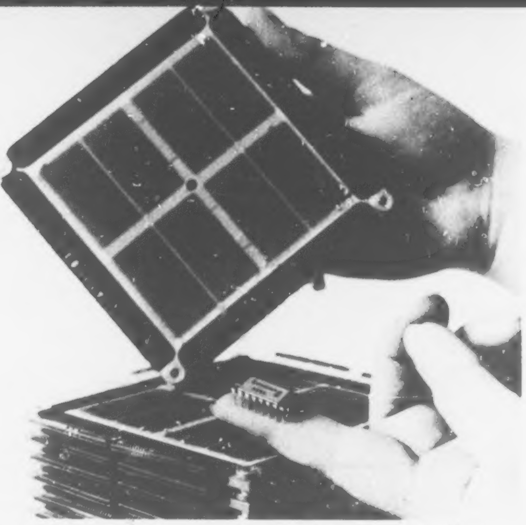
New diagnostic and surgical procedures and instruments will result from the use of laser technology for the benefit of patients.

In the area of medicine the city is acquiring Germany's first center for laser medicine. It was established by well-known enterprises and should decisively improve surgical techniques and radiation therapy. New diagnostic and surgical procedures and instruments will result from the use of laser technology for the benefit of patients.

In order to introduce future-oriented production techniques and robot technology in the manufacture of vehicles, the German automobile manufacturers have established a joint research and development organization in Berlin to concentrate on advanced production systems.

In addition, a cooperation agreement has been concluded between the Technical University of Berlin and the Massachusetts Institute of Technology for the sharing of information, exchange of scientists and joint projects and conferences in various disciplines.

Only to the extent that Berlin succeeds in providing highly qualified experts in the shortest possible time will the city be able to develop into a center for future technologies.



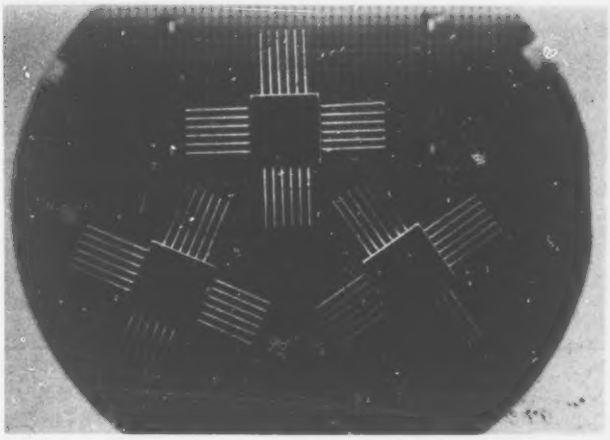
Improved technology has reduced the number of solder connections from several hundred to sixteen.

A great deal of new ground has had to be explored in educating students for as yet uncharted future professions.

Leading data processing companies have established a "Society for New Professions" with the assistance of the Berlin Senate. High school graduates, and graduates of universities and technical colleges will be trained in the professions of the future, such as computer marketing, communications technology, computerized telecommunications and advanced production systems.

Although it will be necessary to organize financing for innovations for which there is high demand, the idea of venture capital has, until recently, been virtually ignored in Germany. Berlin was first to succeed in establishing an "innovation fund" using public monies based on the American model. In this way, risk capital needed by young technology enterprises could be obtained quickly. This fund became a catalyst for the founding of six private venture capital companies in Berlin in which banking institutions as well as insurance companies and other large firms are participating. On average, the 1:3 relationship common in small business investment companies in the United States has become established here: per DM 1 of private venture capital, about DM 3 of public innovation capital are used. The goal is to shift this ratio steadily toward more private participation so that in the long run innovation financing with public funds will become unnecessary.

In addition to the financing gap, a second need is being filled in the form of management assistance and mediation: the need for know-



Siemens element SH 133 C with 89 transistors and 127 resistors on one 3mm^2 chip suitable as amplifier, push-pull modulator, flip-flop or frequency allocator.

how in all areas in which the operators of the often still young technology enterprises are not as yet experienced. Here, the German American venture management exchange is playing a significant role. This is an organization based in Berlin with the goal of arranging the exchange and placement of 40 managers per year for periods of at least 6 months with young, innovative firms in both countries.

German American venture management exchange is playing a significant role.

The support and assistance provided by the Berlin Senate within the framework of its structural policy, which incidentally costs very little, provide incentives for the establishment of pioneer enterprises which start small and grow rapidly. Berlin has been rediscovered by small and medium-sized firms and is clearly considered a very desirable industrial location.

Established firms have shifted some operations to the city and the Berlin economy has achieved a new self-awareness. We are experiencing consolidation in industry and improvement in trade; there is an upturn in tourism, and our promotion of technology is viewed as a model throughout the Federal Republic.

But the process of modernization which has begun in Berlin naturally needs time. In order to be able to inspire particularly long term investments, stable economic and political conditions are indispensable. Therefore, we are grateful for the commitment of our American allies and their invaluable contributions for the further development of our city. ■

Berlin has been rediscovered by small and medium-sized firms and is clearly considered a very desirable industrial location.

DEUTSCHE ZUSAMMENFASSUNG

Senator Elmar Pieroth unterstreicht die vielfaeltigen Bemuehungen von West Berlin, neue zukunftsweisende Technologien in der geteilten Stadt anzusiedeln und den Technologietransfer zwischen Wissenschaft und Wirtschaft zu intensivieren. Ein wichtiges Ziel der Berliner Regierung sei es, die Stadt in ein "Zentrum der Zukunftsindustrien" zu verwandeln. Dazu muessten der Marktzugang erleichtert und die Maerkte fuer Newcomer geoeffnet werden.

Gute Dienste leistet in diesem Zusammenhang nach Darstellung des Senators das Berliner Innovations- und Gruenderzentrum, das in der Bundesrepublik die erste Einrichtung seiner Art ist. Dieses Zentrum wurde in Zusammenarbeit mit der Technischen Universitaet entwickelt und soll neue Technologieunternehmen die schnellere Umsetzung von Forschungsergebnissen in neue Produkte ermoeglichen. Unter einem Dach erhalten die jungen Unternehmer in dem Innovations- und Gruenderzentrum Beratung, Kooperationsmoeglichkeiten sowie technische und personelle Hilfe. Ihnen stehen dabei Gemeinschaftseinrichtungen wie Sekretariat, Telefondienst und Besprechungsraeume zur Verfuegung. Die anfallenden Gebuehren werden je nach Inanspruchnahme abgerechnet.

Nach Angaben von Pieroth plant Berlin nunmehr wegen der hohen Nachfrage nach Plaetzen in dem Gruenderzentrum die Er-

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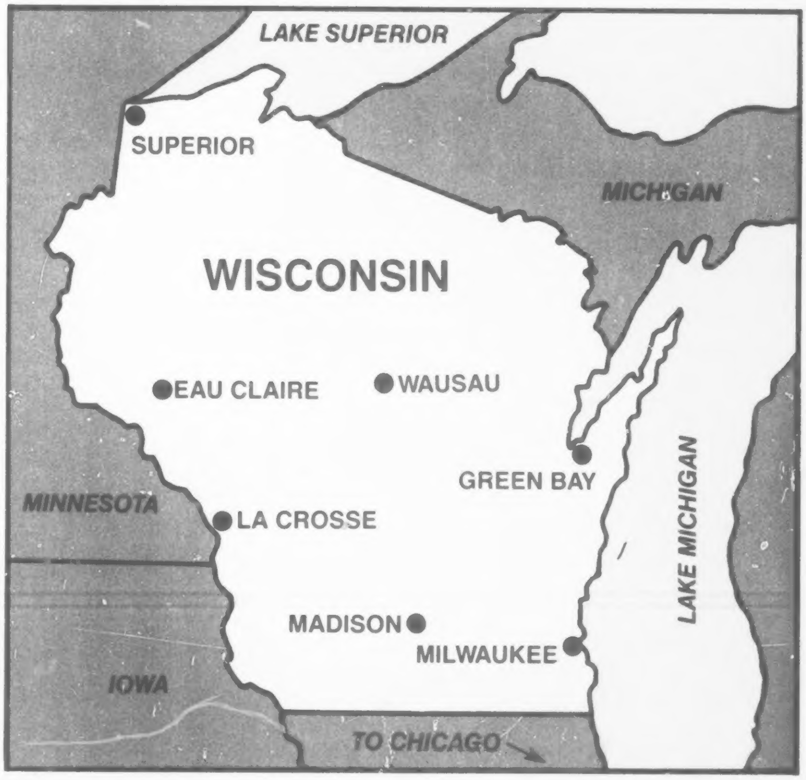

In einem der bedeutendsten wirtschaftlichen Gebiete der USA gelegen, mit Versandsmöglichkeiten von den großen Seen zu internationalen Handelsplätzen bietet Wisconsin große Möglichkeiten zur Geschäftserweiterung.

Unsere deutschen Vorfahren haben uns als Erbe ein sehr geschicktes und leistungsfähiges Arbeitskräftepotential und Qualitätsdienste geschaffen. Und Wisconsin bietet anziehende Steuervergünstigungen für Industrie, Forschung und Entwicklung.

Deutsche Vorfahren schufen unser Erbe. Erlauben Sie uns nun, Ihrer Handelsgesellschaft das Tor zum amerikanischem Markt zu öffnen.

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richtung eines Technologie- und Forschungsparks, aufbauend auf den amerikanischen Erfahrungen aus den 'science parks'.

Ausserdem werden mit Hilfe von Regierungsstellen im Rahmen des Projektes "Innovationsassistent" Hochschulabsolventen an kleine und mittlere Unternehmen vermittelt, die bisher noch keine Wissenschaftler eingestellt hatten. Auf diese Weise soll neuestes Wissen aus den Hochschulen in die Wirtschaft transferiert werden.

Eine sog. 'task force' unter Mitwirkung des Wirtschaftsforschungsinstituts Prognos AG und der Wirtschaftsfoerderungsgesellschaft Berlin soll ausserdem den Unternehmen in der Stadt Bereiche der Spitzentechnik und Wachstumsmaerkte erschliessen.

Pieroth verweist in seinem Beitrag auf verschiedene Schwerpunktbereiche der Technologien, die in Berlin besonders ausgepraegt sind, wie etwa der Kommunikationssektor, die Verkehrstechnik oder auch die Medizin. Berlin werde das erste deutsche Laser-Medizin-Zentrum erhalten, betont der Senator. Um zukunftstraechtige Fertigungstechniken und Robotertechnologien im Fahrzeugbau einzufuehren, haetten sich Unternehmen in der Automobilindustrie in Berlin zu einer Innovationsgesellschaft fuer fortgeschrittene Produktionssysteme zusammengeschlossen.

Pieroth stellt zugleich die Notwendigkeit heraus, heute noch unbekannte Zukunftsberufe zu foerdern. Mit Starthilfe des Senats haetten damit deshalb fuehrende EDV-Hersteller in Berlin eine "Gesellschaft fuer neue Berufe" gegruendet.

Auch sei es in Berlin erstmals in der Bundesrepublik gelungen, mit oeffentlichem Kapital einen Innovationsfonds fuer Venture Capital nach amerikanischem Vorbild einzurichten. Hieraus seien bislang 23 Projekte mit einem Volumen von 11 Millionen DM gefoerdert worden. Dieser Fonds sei Initialzuendung fuer die Gruendung von inzwischen rein privatwirtschaftlichen Venture-Capital-Gesellschaften in Berlin gewesen.

Pieroth raeumt zum Schluss seines Beitrages ein, dass der in Berlin eingeleitete wirtschaftliche Erneuerungsprozess naturgemaess Zeit brauche. Auf die besondere Situation der Stadt hinweisend, unterstreicht er die Notwendigkeit von stabilen oekonomischen, politischen und wirtschaftlichen Verhaeltnissen in Berlin, die erforderlich seien, um langfristige Investitionen an die Stadt zu binden. Deshalb seien die Berliner besonders dankbar fuer das Engagement der amerikanischen Verbuendeten und deren "unersetzlichen Beitrag" fuer die weitere Entwicklung der Stadt in Freiheit.

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Some of Morgan's European Corporate Banking officers in New York after a regular meeting to share market developments. From left, Hanjo Roosen, Harvey Struthers, John Comfort, Julie Blake, William Holding (head of the department), François de Seroux , Bence András.

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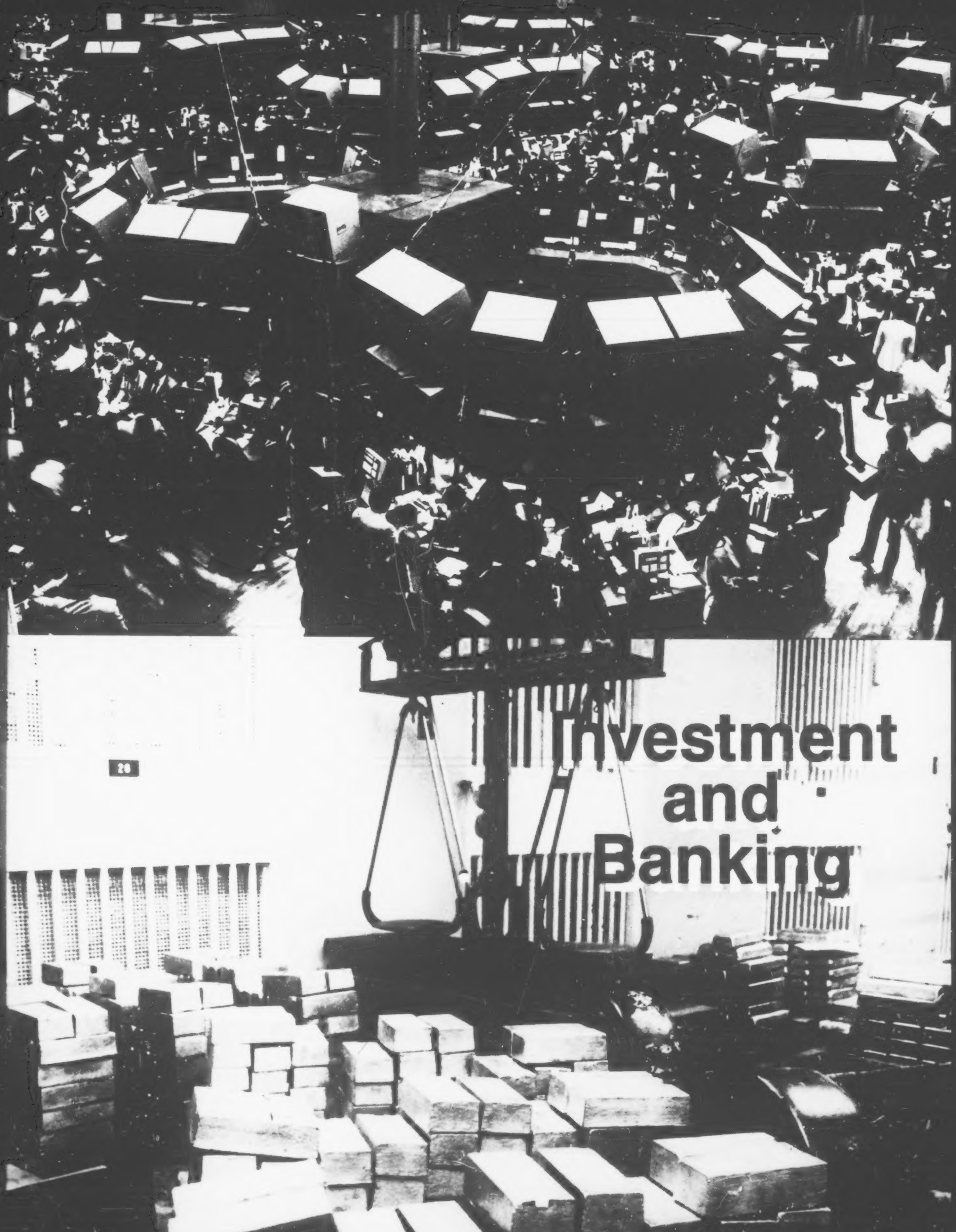

CitiBanking.
Und wie Porsche damit arbeitet.

CitiBanking

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Den hohen Anspruch an das eigene Produkt überträgt Porsche auch auf sein Finanzmanagement. Aus diesem Grund entschied es sich für CitiBanking.

Die Praxis: Die Verkaufserlöse aus dem wichtigen US-Markt – jährlich stattliche 400 Millionen Dollar und mehr – werden in DM konvertiert. Um Kursverlusten vorzubeugen, schließt Porsche pro Jahr mehrere Hundert Devisen-Termingeschäfte ab.

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Das Ergebnis: Hohe Effizienz bei Porsche auch bei der Bearbeitung der Dollar-Positionen.

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Gunther Sonntag und Kathy Hoffmann von der Citibank Stuttgart – beide Spezialisten für CitiBanking – betreuen das Haus Porsche.

Sie haben die individuelle CitiBanking-Lösung erarbeitet, mit der Porsche heute seine Devisen-Termingeschäfte mit der Citibank überwacht und bearbeitet.

Porsche-Finanzvorstand Heinz Branitzki (Mitte) diskutiert die jüngste Entwicklung in der Banktechnologie mit Philip Sherman, Vorstandsvorsitzender der Citibank Aktiengesellschaft (rechts), und Gunther Sonntag, Kundenbetreuer der Citibank Stuttgart und zuständig für das Haus Porsche.

Dazu Porsche-Finanzvorstand Heinz Branitzki: „Frau Hoffmann und Herr Sonntag haben CitiBanking so auf unsere Ansprüche abgestimmt, daß sich die Effizienz unseres Devisen-Managements wesentlich erhöhte und wir jetzt noch besser planen können als früher."

Mehr zu diesem Thema entnehmen Sie bitte der Broschüre „CitiBanking. Basis für aktives Finanzmanagement", die wir Ihnen gern zusenden:

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New Developments in West Germany's Financial Markets

by **Kurt Morgen**
Member of the
Board of Directors
of the Dresdner Bank AG,
Frankfurt

During the past two years the German financial markets have been marked by the gradually increasing economic recovery and the progressing consolidation of government budgets. International influences like the high US interest level, the development in the U.S. dollar exchange rate and the debt restructuring needs of third world countries have had disturbing effects. However, they did not lastingly impair the overall positive development. A number of institutional innovations have contributed to a recovery and a further diversification of the financial markets.

A number of institutional innovations have contributed to a recovery and a further diversification of the financial markets.

Success with the Consolidation of the Public Budgets

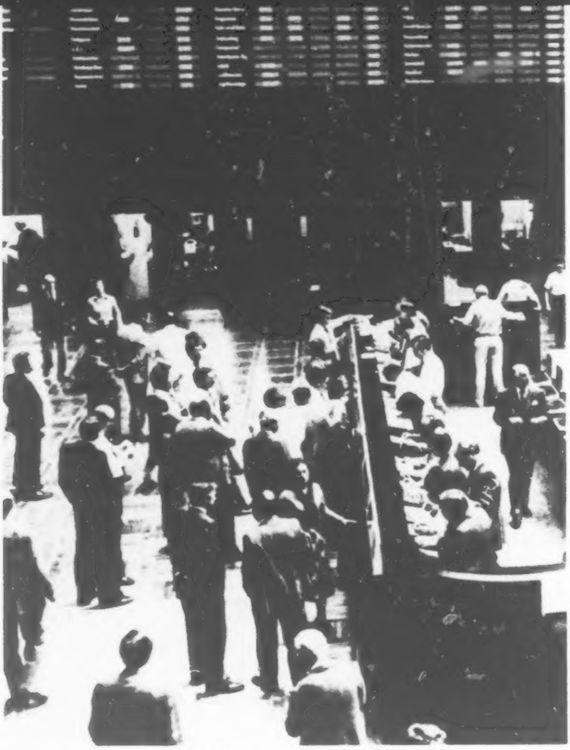
After a steep increase, especially since 1977, the public debt, i.e. federal, Länder and local, amounted to 670 million DM or 40% of the gross national product at the end of 1983. This might be considered modest compared to the almost 4 billion DM debt of just the U.S. federal government which alone represents more than 40% of the U.S. gross national product. Concerned with the country's financial stability the new federal government initiated substantial cuts in expenditures geared to arrive at a more balanced budget. The annual new indebtedness of total public budgets (federal, Länder, local) fell from 70 billion DM in 1982 to an expected 50 billion in the current year. According to the projection of the Budget Planning Council, the annual deficit is to be reduced to 23 billion DM by 1988.

This development, and increased savings, helped to ease the financial markets considerably. It represents an exceptional achievement and is also of great international significance. Together with the easier credit policy of the Deutsche Bundesbank this had a lasting effect on the availability of funds for business and the construction sector. Long term capital interest rates which in 1981 peaked at above 11% fell to 7.4% now. Real interest rates, however, are still too high considering the present low inflation expectations, and represent a clear disincentive to investment.

Lasting Decrease in Interest Rates and Upturn in Securities

After years of stagnation and recession, it was imperative for German enterprises to normalize their revenues and financial structure.

For the first time in quite a while the turnover in stocks exceeded that of bonds.



Frankfurt stock exchange

Many debtors used the improved market conditions to correct the previously created imbalances.

The gradual easing of the monetary restraint policy of the Deutsche Bundesbank created favorable conditions. The lowering of the discount rate from 7½% to the present 4½% reflects these changes. Many debtors used the improved market conditions to correct the previously created imbalances in their financial structures and tried to consolidate their liabilities. While the long term new indebtedness increased significantly in the business sector, short term lending grew slowly.

Parallel to this development there was a shift in the formation of capital in favor of long term investment schemes. The capital market, especially the securities markets, increasingly regained importance, and met financial needs adequately.

The German securities market experienced a remarkable renaissance. Foreign investors also showed renewed interest. For the first time in quite a while the turnover in stocks exceeded that of bonds. A change in the trend had already commenced in the autumn of 1982 when the new coalition in Bonn signaled an economic and fiscal policy switch oriented to the goal of sound economic growth. The first signs of an economic recovery started a trend of re-evaluating German enterprise prospects. So far, this trend was interrupted only by a few spells of consolidation, after the elections of March 1983. A virtual run on German stocks occurred. From autumn 1982 till autumn 1984 share prices rose an average of 40 - 50%. Exceptional gains were achieved by securities of the investment goods industries and the car manufacturers.

This upward trend in stock prices was increasingly supported by the improved profit expectations of the German economy. Increasing yield expectations for capital investment intensified the enterprises' propensity to invest and thus created the precondition for dividend increases. In the meantime, such increases were realized to a considerable extent.

This favorable background prompted a number of companies to broaden their equity capital through new stock issues, in addition to strengthening their surplus reserves and in this way, they reduced their dependence on outside financing. In 1983, newly issued stock with a market value of 7.3 billion DM was placed which was significantly more than during any other post-war year. In 1984 this record will be probably surpassed.

It was especially welcome news that a number of medium-sized companies decided to place their closely held stock at the exchange in order to make it available to the public and improve the basis for future capital increases. This is a very positive development from the overall economic perspective and is strongly promoted by the banks.

Compared to other countries, the 450 stock corporations listed on the stock exchange are relatively few. The potential of "stock exchange candidates", however, is substantial if one also includes those companies which are still organized in a legal structure different from the Aktiengesellschaft (stock corporation), e.g. the Gesellschaft mit beschraenkter Haftung (limited partnership). In these cases, a conversion of the company's legal structure would be the first step.

The advantages of a stock exchange listing are being increasingly recognized by dynamic enterprises. In addition to the "official quotation" the German stock market law also provides for the so-called unofficial "over-the-counter trading." Here, the requirements for admission are less strict and the increased use of the stock market for financing purposes is thus free of institutional obstacles. The creation of an additional "parallel market", which has been debated for a long time, does not appear to be an adequate solution. However, with regard to the experiences with the "newcomers" to the stock exchange, a reform of the admission requirements should be considered.

One expectation linked with the change in government so far has only been fulfilled to a limited extent. This is the denationalization of publicly owned enterprises by broadly distributing the shares of those companies. Although there exists a general consensus to the effect that the state should act as an entrepreneur only in exceptional cases, it is obviously difficult to break up traditional structures and to make use of private capital and private initiative also for those enterprises which for decades have been under public control. In 1984, as a starter, the participation of the Federal Republic of Germany in the VEBA AG was reduced from almost 44% to 30%. The available shares with a nominal value of 222 million DM were placed by a bank consortium and were received by private investors with great interest.

Deutsche Lufthansa is supposed to decrease its share of government ownership from 79% to 55%.

According to a recent announcement by the finance minister, Dr. Gerhard Stoltenberg, the Deutsche Lufthansa is supposed to decrease its share of government ownership from 79% to 55% through the sale of shares to the general public. The federal government's 20% share of Volkswagen AG is slated to be reduced to 14%. These are but a few examples from the long catalogue of divestment of government ownership. The total market value of shares to be sold to the private sector is estimated at 1.5 to 2 billion DM. Each step towards a denationalization is a financial relief for the public sector, while the private accumulation of capital, which is so important for our economic and social order, would receive a new impetus.

Proven and New Instruments

An almost forgotten financing instrument with features of the common stock, the Genusschein (participating certificate), has been rediscovered and issued by a number of enterprises. It has the advantage that it can be tailored to meet the specific financing needs of a particular company. For instance, it can provide for the convertibility into shares, including shares of the parent company, as was the case with Alldephi, a subsidiary of N.V. Philips' Gloeilampenfabrieken. A further increase in the use of participating certificates is anticipated, particularly as banks proceed to adjust to the new requirements of the changes in the German banking law.

The stock option, which had been reintroduced to the German stock exchanges in the early 70's, after an interruption of several decades as a special form of commodities trading, was very successful due to the favorable development in stock prices and the general interest in the securities exchanges connected with them. Based on new experience some important changes were introduced in 1983 to the effect of making option trading easier, more transparent and more attractive for private investors. For example, the base prices were standardized and the expiration dates were reduced to four dates, namely the beginning of each quarter.

Only those shares which are continuously traded in the "variable-price market" are admitted to the stock option business, or, to put it more simply, shares of large and well-known corporations with a high exchange turnover. The main emphasis clearly is on purchase options (as distinguished from the sales options). This preference, however, may change depending on the market situation. A commission of stock exchange experts appointed by the Federal Minister of Finances is presently investigating whether fixed interest bonds should be included in option trading.

Large foreign corporations continue to introduce their stock at the German securities exchanges. In each case, the admission must be arranged by a German bank. At the Frankfurt stock exchange, which traditionally has a large trading of international securities, not less than 181 foreign stocks—among them shares of 50 US corporations—were officially quoted at the end of 1983 along with 227 domestic stocks. Especially the large enterprises of consumer goods industries expect a boost for the marketing of their products by listing on the German stock exchanges. Besides the extended financing possibilities, the listing at the exchange leads to frequent coverage of the company in the financial press and other news media.

Venture Capital on the Move

Venture capital financing is still in an early stage in Germany, but new initiatives have been introduced. The experiences gained in the US over a long period may serve as examples in order to better supply growing new enterprises or expanding companies with the necessary start-up capital wherever conventional financing methods are not available or are inadequate.

Just to mention a recent case: in West-Berlin, a fund was established under the name Technologie-Investitions-GmbH with the objective of promoting future-oriented projects and providing technological advice and management support. Shareholders are the Dresdner Bank Group, the Bayerische Vereinsbank and, with its technological experience, the Bayerische Motorenwerke Aktiengesellschaft (BMW). In addition, the know-how of Churchill International, San Francisco is being drawn

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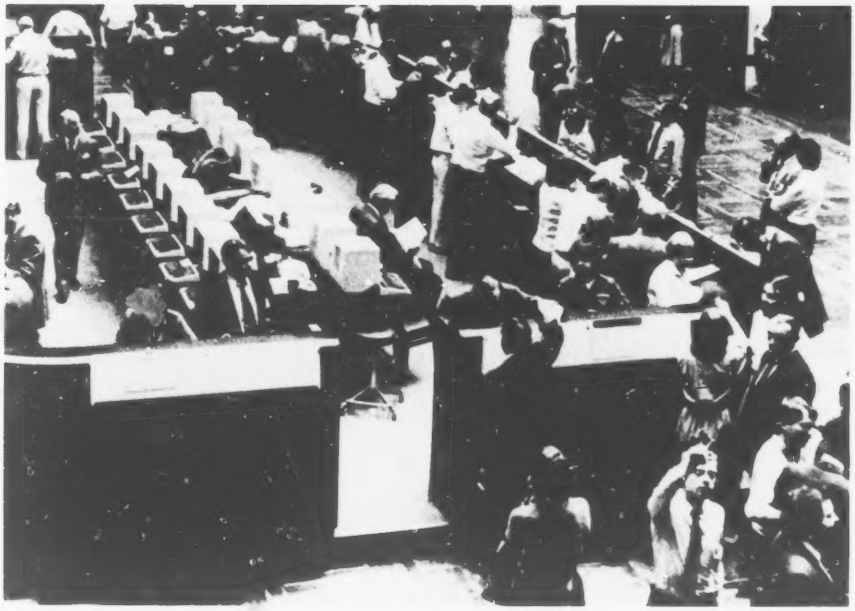

Activities on the stock exchange in Frankfurt

upon. This pioneering setup and the special situation of Berlin promise interesting perspectives and far-reaching effects.

International Implications

The reduction of interest rates of the past several years also benefitted the market for foreign DM bonds. Their yields were likewise reduced from 11% in 1981 to below 7.5%. It is hardly necessary to mention that such average numbers are calculated on the basis of a broad spectrum of yields, each of which is dependent on the rating and the reliability of the issuer varying according to terms and other conditions. The volume of capital issues of foreign DM bonds almost tripled from 5.7 billion DM in 1981 to nearly 17 billion DM in 1983. In 1984, a similarly high level will most probably be reached.

It is worth mentioning that until recently foreign investors in German fixed interest bonds were liable for a 25% withholding tax. This tax was a carry-over from the days when an *influx* of undesirably large amounts of net capital put upward pressure on the D-Mark.

These times are gone for now. Since 1982 there was concern because of the net capital *outflow* caused by the high interest rates in the U.S. and the expectation of continuing US-dollar rate increases. When the U.S. government removed the withholding tax on securities in the summer of 1984, the abolition of the German coupon tax became just a question of time. Finally, on October 3, 1984 the government announced that the tax was to be cancelled retroactively to August 1, 1984 subject to legislative approval.

. . .until recently foreign investors in German fixed interest bonds were liable for a 25% withholding tax.

. . .the ECU. . .is comparable to the special drawing rights of the International Monetary Fund.

Another interesting development is the growing role of the European Currency Unit (ECU) in the international credit business. The ECU has gained a remarkable position behind the leading U.S. dollar and the German mark. As an accounting unit within the framework of the European Monetary System the ECU is composed of the currencies of the member countries. Insofar it is comparable to the special drawing rights of the International Monetary Fund. However, it is also increasingly used for commercial financing. After the most recent adjustment of the shares of the currencies composing the ECU, including the Greek Drachme for the first time, the German mark has a share of 32% vis-a-vis 19% of the French franc, for example.

Whereas in some European countries with weaker currencies, the ECU, with the approval from their governments and central banks, is making more and more progress, the German authorities so far have been rather conservative. This attitude has sometimes been misinterpreted as being not very enthusiastic about the European unit. The reason for this reluctance actually is that the wording of the German currency law is such that monetary claims in ECU constitute a form of indexing which is illegal. According to German law, the ECU can-

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HYPO BANK
Bayerische Hypotheken- und Wechsel-Bank
Aktiengesellschaft

. . . monetary claims in ECU constitute a form of indexing which is illegal.

not be considered a currency, but just an accounting unit. This is the reason why the Deutsche Bundesbank has refrained from giving its general approval to the maintenance of ECU-accounts with German banks. It is possible, though, to request special permission for individual bond issues or loan transactions. This limitation represents a disadvantage for German banks in meeting international competition. It is hoped that the German law will be adjusted in order to take account of the new developments and to contribute to European unity.

A recent introduction to German securities exchanges were the option bonds. Within the last two years they have rapidly become established and are even widely used by banks for the long term refinancing of their lending business. Besides the annual fixed interest rate, these bonds give the investor the option right to purchase a certain number of newly issued shares of the issuing company or its parent company. Because of these additional rights, yield option bonds may be substantially below those of other fixed interest bonds, yet they are of interest to investors due to the expectation of the shares' future appreciation.

Reform of the Banking Legislation

On January 1, 1985, an amendment of the German Banking Law is to go into effect. The general objective of this reform is to strengthen the capital base of banks and place an effective limitation on credit risks. Right towards the finish of the lengthy legislative process opinions clashed on a number of individual issues depending on whose interests were at stake.

A consolidation for regulatory purposes is the centerpiece of the reform. Accordingly, total loans of each individual credit institution must not exceed eighteen times its equity capital; this ratio applies also to the consolidated balance sheet of the parent bank and its subsidiaries, defined as any participation of 40% and more. Since regulatory requirements differ from country to country adaptation problems are inevitable. For this reason, the law provides for a transition period of 6 years.

To abide by the new statutory requirements the banks will have to come up with substantially more capital unless they are content with reducing their loan volume. This raised the definitional problem of capital. The traditional concept, i.e. paid-in capital plus retained earnings and reserves, was amplified by the inclusion of participating certificate capital of up to 25% of equity capital.

The experience of recent years has shown generally that the German universal bank system meets the high expectations and that it is able to adapt innovatively to new developments. In Germany it is observed with interest that in other countries there is also a trend toward combining different banking activities under one roof and that the traditional division between commercial banking and investment banking is thus gradually giving way to more pragmatic solutions. ■

. . . in other countries there is also a trend toward combining different banking activities under one roof.

DEUTSCHE ZUSAMMENFASSUNG

Kurt Morgen geht in seinem Beitrag auf die Entwicklung auf den deutschen Finanzmaerkten in den vergangenen beiden Jahren ein, die er insgesamt trotz der stoerenden internationalen Einfluesse, insbesondere infolge der hohen US-Zinsen und des starken Dollars, als "erfreulich" bewertet. Rueckblickend erteilt der Bankier vor allem der Finanzpolitik der Bundesregierung ein hohes Lob. Diese habe zur Verringerung der Neuverschuldung der Gesamthaushalte (Bund, Laender und Gemeinden) von ueber 70 Milliarden DM in 1982 auf etwa 50 Milliarden in 1984 beigetragen. "Diese auch in ihrer internationalen Ausstrahlung gar nicht hoch genug einzuschaetzende Entwicklung darf als eine herausragende Leistung der Bundesregierung angesehen werden", schreibt Morgen. Durch die Finanzpolitik und die Kreditpolitik der Bundesbank sei die Kapitalversorgung der deutschen Wirtschaft und des Wohnungsbaus nachhaltig erleichtert worden. Der langfristige Kapitalzins in der Bundesrepublik, der zeitweilig ueber 11% gelegen habe, sei bis auf 7,4% zurueckgegangen. Der Bankfachmann vertritt allerdings die Auffassung, dass der deutsche Realzins bei einer Inflationsrate von um 2% noch immer ueberhoeht sei.

Morgen geht im weiteren in seinem Beitrag auch auf die Lage an den deutschen Aktienmaerkten ein, die nach seiner Einschaetzung eine bemerkenswerte Renaissance erlebten. Des weiteren streift er die verschiedenen bankenrechtlichen Aenderungenim vergangenen Jahr. Im einzelnen schreibt Morgen u.a.: "Fuer die deutschen Unternehmen kam es nach den Jahren der Stagnation und Rezession darauf an, Ertragssituation und Finanzstruktur wieder zu normalisieren. Durch die schrittweise Lockerung der monetaeren Restriktionen der Deutschen Bundesbank wurden hierfuer guenstige Voraussetzungen geschaffen . . . Viele Kreditnehmer nutzten die verbesserten Marktbedingungen dazu, die zuvor entstandenen Unausgewogenheiten ihrer Finanzstruktur zu beseitigen und bemuehten sich um eine

Konsolidierung ihrer Verbindlichkeiten. Waehrend die laengerfristige Neuverschuldung des Unternehmensbereichs deutlich zunahm, blieb das kurzfristige Kreditgeschaeft verhalten.

Parallel dazu hat sich auch die Struktur der Geldvermoegensbildung zugunsten der laengerfristigen Anlageformen veraendert. Der Kapitalmarkt, insbesondere die Wertpapiermaerkte, gewannen wieder zunehmend an Gewicht, so dass den Finanzieungserfordernissen angemessen Rechnung getragen werden konnte."

Auf die Situation an den deutschen Aktienmarkten eingehend, betont Morgen, auch auslaendische Anleger haetten diesen wieder verstaerktes Interesse zugewandt, und er faehrt fort: "Erstmals seit langem ueberstiegen die Boersenumsaetze in Aktien diejenigen von Rentenwerten. Eine Kurswende hatte schon im Herbst 1982 eingesetzt. Der Koalitionswechsel in Bonn, der eine an der Zielsetzung gesunden wirtschaftlichen Wachstums ausgerichtete Wirtschaftsund Finanzpolitik erwarten liess, sowie erste Anzeichen konjunktureller Belebung setzten einen Prozess der Neubewertung des deutschen Unternehmenskapitals in Gang, der bis heute nur durch wenige Konsolidierungsphasen unterbrochen wurde. Nach den Neuwahlen vom Maerz 1983, die den Regierungswechsel in eindrucksvoller Weise bestaetigten, ergab sich geradezu ein Run auf deutsche Aktien. Vom Herbst 1982 bis Herbst 1984 erhoehten sich die Aktienkurse im Durchschnitt um 40-50%. Herausragende Kursgewinne erzielten die Werte der Investitionsgueterindustrie und des Automobilbaus.

Untermauert wurde die Aufwaertsbewegung der Aktienkurse zunehmend durch die verbesserten Ertragsperspektiven in der deutschen Wirtschaft . . .

Dieser freundliche Hintergrund veranlasste zahlreiche Gesellschaften, ihre Eigenkapitalbasis neben der Ruecklagenverstaerkung auch durch Aktienemissionen zu verbreitern, also die Abhaengigkeit von der Fremdfinanzierung zu reduzieren. 1983 wurden junge Aktien deutscher Gesellschaften im Kurswert von 7,3 Milliarden DM abgesetzt, deutlich mehr als in jedem anderen Jahr der Nachkriegszeit; 1984 duerfte dieser Rekord noch uebertroffen werden.

Besonders erfreulich war, dass sich eine Reihe mittlerer Unternehmen entschloss, ihre zuvor in fester Hand befindlichen Aktien an den Boersen einfuehren zu lassen, damit einem breiten Publikum zugaenglich zu machen und so die Ausgangsbasis fuer Kapitalerhoehungen zu verbessern . . .

Mit rund 450 liegt die Zahl der boersennotierten Aktiengesellschaften in der Bundesrepublik Deutschland im Vergleich zu anderen Laendern relativ niedrig. Die Zahl der moeglichen "Boersenkandidaten" ist jedoch beachtlich, wenn man auch an solche Unternehmen denkt, die derzeit noch in einer anderen Rechtsform als der der Aktiengesellschaft, z.B. als Gesellschaft mit beschraenkter Haftung oder als Kommanditgesellschaft, gefuehrt werden . . .

Da das deutsche Boersenrecht neben der "amtlichen Notierung" auch den sogenannten "geregelten Freiverkehr" kennt, bei dem die Zulassungsanforderungen weniger hoch sind, steht institutionell einer verstaerkten Inanspruchnahme des Aktienmarktes fuer die Unternehmensfinanzierung nichts im Wege. Die Schaffung eines zusaetzlichen "Parallelmarktes", die seit laengerem diskutiert wird, erscheint nicht zwingend erforderlich. Wohl aber mag auf Grund der mit Boersenneulingen gewonnenen Erfahrungen eine gewisse Ueberarbeitung der Zulassungsbestimmungen zweckmaessig erscheinen."

Kritisch aeussert sich Morgen zu den Privatisierungsplaenen der Regierung: "*Eine* mit dem Regierungswechsel verbundene Erwartung ist bisher nur im bescheidenen Umfang in Erfuellung gegangen, naemlich die Privatisierung von Unternehmen im Besitz der oeffentlichen Hand durch breitgestreute Placierung der Aktien solcher Gesellschaften . .

Nach einer Ankuendigung des Bundesfinanzministers Dr. Gerhard Stoltenberg soll als weiteres renommiertes Unternehmen die Deutsche Lufthansa ihren Staatsanteil durch Verkauf von Aktien an private Anleger von 79% auf 55% reduzieren. Ferner ist vorgesehen, den Anteil der Bundesregierung an der Volkswagen AG von 20% auf 14% zu senken. Dies sind nur einige Beispiele aus einer langen Liste denkbarer Privatisierungen. Der gesamte Marktwert des hierfuer in Frage kommenden Staatsvermoegens wird auf 1,5 bis 2 Milliarden DM geschaetzt . . ."

Zur Venture-Capital-Szene schreibt Morgen: "Als ein Bereich der Unternehmensfinanzierung der in der Bundesrepublik noch unterentwickelt ist, muss die Venture-Capital-Finanzierung angesehen werden. Aber auch hier regen sich neue Initiativen. Die in den USA ueber eine lange Periode hinweg gewonnenen Erkenntnisse sollten fuer deutsche Verhaeltnisse ausgewertet und genutzt werden . . ."

Morgen vertritt ferner die Ansicht, von der Zinssenkung in den letzten Jahren sei auch der Markt der DM-Auslandsanleihen beguenstigt worden. Dessen Renditen seien gleichfalls von 11% 1981 auf unter 7,5% zurueckgegangen . . . Das Emissionsvolumen der DM-Auslandsanleihen habe sich von 5,7 Milliarden DM 1981 auf knapp 17 Milliarden DM 1983 verdreifacht. 1984 duerfte ein aehnlich hoher Stand erreicht werden.

"Sorge bereiten seit 1982 vielmehr die Nettokapitalabfluesse, die insbesondere durch das hohe Zinsniveau in den USA und die Erwartung steigender Dollarkurse bewirkt wurden", meint Morgen. "Als die US-Regierung im Sommer 1984 die dortige Quellensteuer auf Wertpapiere beseitigte, sei die Abschaffung der deutschen Kuponsteuer nur noch eine Frage der Zeit gewesen."

Zur veraenderten Position der ECU stellt Morgen fest: "Die wachsend Rolle der Europaeischen Waehrungseinheit ECU wird von den deutschen Banken aufmerksam beobachtet. Sie hat sich hinter dem unveraendert mit weitem Abstand fuehrenden US-Dollar und der D-Mark einen festen Platz erobert. Sie stellt im Rahmen des Europaeischen Waehrungssystems eine gewissermassen aus den Einzelwaehrungen zusammengesetzte synthetische Verrechnungseinheit dar, die insoweit den Sonderziehungsrechten des Internationalen Waehrungsfonds vergleichbar ist, zunehmend aber auch fuer kommerzielle Finanzierungen genutzt wird . . .

Waehrend in einigen europaeischen Laendern mit schwaecherer Waehrung der ECU staerker im Vordringen ist und sich auch des Wohlwollens von Regierungen und Notenbanken erfreut, haben sich die offiziellen Stellen der Bundesrepublik Deutschland dem ECU gegenueber bisher sehr zurueckhaltend gezeigt. Diese Einstellung ist mitunter als wenig europafreundlich missdeutet worden. Tatsaechlich liegt die Zurueckhaltung aber darin begruendet, dass nach dem Wortlaut des deutschen Waehrungsgesetzes Geldforderungen in ECU eine unzulaessige Indexierung darstellen. Der ECU kann nach geltendem deutschen Recht nicht als Waehrung angesehen werden, sondern lediglich als eine Rechungseinheit. Aus diesen Gruenden erteilt die Bundesbank vorerst auch keine generelle Genehmigung zur Fuehrung von ECU-Konten bei deutschen Kreditinstituten. Fuer Anleihevorhaben oder Kreditgeschaefte koennen allenfalls Einzelgenehmigungen beantragt werden. Fuer die Banken bedeutet dies im internationalen Wettbewerb eine immer spuerbarer werdende Einschraenkung. Es ist zu hoffen, dass die deutsche Gesetzgebung im Sinne der europaeischen Solidaritaet bald den sich entwickelnden neuen Gegebenheiten angepasst wird . . ."

Focus on Hessische Landesbank - Girozentrale -

"Half of Germany's top 10 banks are Frankfurt-based. We're one of them."

Let's start with Frankfurt. Why is Frankfurt so important?

"Frankfurt ranks among the world's foremost banking and financial centers. 150 German banking institutions operate here, and Frankfurt has more international banks than any other city in Continental Europe.

The Bundesbank is headquartered here, and the Frankfurt Stock Exchange is Germany's largest, accounting for nearly half of the stock exchange transactions, two-thirds of its dealings in foreign shares and some 80 per cent of the business in foreign fixed-interest securities.

Perhaps less well-known internationally is that Hessische Landesbank is one of Frankfurt's big native-born banks. Half of Germany's top 10 banks are Frankfurt-based. We're one of them."

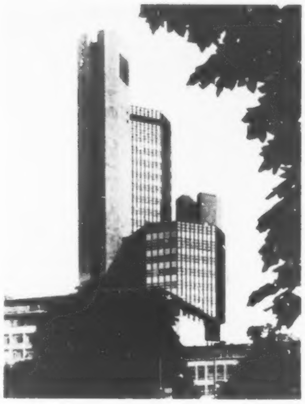
About the bank itself. What are its size and structure?

"With total assets of some DM 63 billion, Hessische Landesbank is Germany's 10th largest bank, 3rd among Landesbanks. It is a government-backed regional bank with its liabilities guaranteed jointly by the State of Hesse and its Sparkassen and Giro Association. We also act as banker to the State of Hesse from which our name is derived, and perform clearing functions for the 52 local Sparkassen."

What about your service facilities?

"As a German universal bank, our facilities cover the full range of commercial and investment banking services. Internationally, we concentrate on wholesale banking and medium to long-term financing.

Recently we have also significantly expanded our money market operations, drawing on the combined facilities of our London, New York, and Luxembourg dealing rooms.



Moreover, we participate regularly in international bond, note and share issues, and perform brokerage functions for international investors. Our membership of the Frankfurt Stock Exchange facilitates dealing in quoted shares and fixed-interest securities."

And sources of funds?

"A large part of our funding is done by issuing our own bonds and SD Certificates (Schuldscheindarlehen). The total outstanding is over DM 26 billion. As well, corporations, governments, and other institutional investors consider Hessische Landesbank a prime name for large-scale deposits."

Financial Highlights	DM million	
December 31	**1982**	**1983**
Business Volume	64,638	65,315
Balance sheet total	62,271	62,999
Total credit volume	49,929	49,590
Short-term assets	16,707	16,964
Due from banks	9,668	10,884
Due from customers	7,039	6,080
Long-term loans	28,252	28,013
Loans to bank	4,192	4,383
Loans to customers	24,060	23,630
Short-term liabilities	18,593	17,080
Long-term liabilities	5,459	5,225
Bonds issued	24,994	26,720
Capital and reserves	**1,241**	**1,291**
Net income	45	75

Who are the bank's main clients?

"As a wholesale bank, our service facilities are tailored for large, internationally-active corporations, foreign governments, and financial institutions, as well as subsidiaries of international companies operating in Germany. As bankers to the State of Hesse, we support statewide and municipal programs, and work closely with Hesse's Sparkassen and their clients, for example on the foreign side."

How do you see your position developing internationally?

"Without neglecting our home base in Frankfurt, we have assembled a team of banking professionals devoted to building a strong international track record based on pragmatic banking principles, the most modern technical and support facilities, and the highest standards of client service. International banking is quite competitive, and banks that try harder for their clients and give them fast, personal service often have the edge. This is one of our major objectives."

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Junghofstrasse 18-26
D-6000 Frankfurt/Main
Tel.: (069) 132-01, Tx: 415291-0

New York Branch
499 Park Avenue
New York, New York 10022
Tel.: (212) 3712500, Tx: 238614

London Branch
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London EC2R 6DD
Tel.: 01-7264554, Tx: 887511

Luxembourg Subsidiary
Helaba Luxembourg
Hessische Landesbank
International S.A.
4, Place de Paris
Tel.: (52) 4994011, Tx: 3295 hela lu

Helaba Frankfurt
Hessische Landesbank -Girozentrale-

MANNESMANN

This success story has many authors. But only one signature.

It's the story of our H241—world champion in economy, engineering, workmanship, and availability rate.

And who wrote it?

The first chapter was by the designers at Mannesmann Demag, our mechanical engineering group. (It also makes telescopic and lattice boom cranes, compressors, plastics injection molding machines and machinery, plants and systems for steel mills and materials handling, small wonder that the H241 also benefited from these other accumulations of knowledge and capability.)

The next chapter came from the engineers at Mannesmann-Rexroth, experts in hydraulic and control technology. They developed and built all the hydraulic power and control components of this excavator out of their own experience.

Last but not least, one more chapter was written by our tube company, Mannesmannröhren-Werke, the leading producer of high-tech tubular products such as the cylinders of the excavator.

So much for the authors.
And what's their joint signature?
Mannesmann.

Of course there are other authors writing under that name who have turned out their success stories in measurement and automation technology, information systems, power-plant construction, and general contracting.

Maybe we can write our next success story for you.

Ask the man from Mannesmann

Mannesmann Capital Corp
New York NY (212) 826-0040

Mannesmann Oilfield Tubulars Corp
Houston TX (713) 552-4069

Mannesmann Pipe & Steel Corp
Houston TX (713) 960-1900

Mannesmann International Alloys, Inc
Sugar Land TX (713) 494-6031

Mannesmann Demag Corp
Cleveland OH (216) 248-2400

The Rexroth Corporation
Bethlehem PA (215) 694-8300

Mannesmann Tally Corp
Kent WA (206) 251-5500

Tradition und Fortschritt
Erfolgreiche Planung fuer US-Geschaefte

Tradition and Progress: Planning for Success in U.S. Operations

by Walter F. O'Connor
Vice Chairman, International
Peat, Marwick, Mitchell & Co.

Profitable marriages of German tradition of product excellence and U.S. consumer demand

- A large German manufacturer of buses, trucks and other heavy equipment capitalized on a market niche in the U.S. After painstaking research, the company decided that its buses had a clear competitive advantage over conventional American buses. Initial sales and ensuing customer satisfaction led the company to establish a U.S. based assembly operation.
- An enduring success story is that of a German manufacturer of exclusive automobiles, which operating in a specific market niche, has increased its U.S. sales year after year in spite of the recession.
- American Hoechst is the largest and fastest growing subsidiary of the Hoechst Group—a highly diversified group producing products from petrochemicals and plastics to pharmaceuticals, dyes, pigments and textile chemicals. The Hoechst Group gave the world the first oral antidiabetic and the first local anesthetic, novacaine. American Hoechst is now rated in the top 250 of the Fortune 500. Sales grew from $1 million in 1953, the first year of business, to $1.5 billion in 31 years.

American investment in the U.S. is a workable, profitable marriage of the German tradition of product excellence to U.S. consumer demand and fast paced progress.

One of the surest, least expensive and most painless ways to avoid loss is to learn from the mistakes of others.

It will not serve us well however, to be too selective in our evaluation of German or foreign investment in the U.S. in general. There have been many mistakes. One of the surest, least expensive and most painless ways to avoid loss is to learn from the mistakes of others.

The following words of wisdom have been gleaned from interviews with approximately forty foreign-owned companies located primarily in the eastern and central United States. The companies range from large to small, new to well established. Most are involved in manufacturing and distribution. And most agree that the blunders they've committed have been surprisingly basic—yet even the top business people in the group found them hard to avoid. The pitfalls are not restricted to but appear to be intensified in these areas:

- marketing
- acquisitions
- management/personnel
- organization
- financial reporting
- use of advisors

Competitive, concentrated marketing

Because North America is the most competitive market in the world, the companies that invest here the most successfully sell products with a clear and discernible competitive edge over both U.S. and other foreign-made goods. While this seems obvious, it is easy to overlook the fact that a competitive edge in Europe or Japan does not constitute one in the United States.

A competitive edge in Europe or Japan does not constitute one in the United States.

There is more to a competitive edge than just product and price. A case in point: one German company sells a product here that is obviously technically superior to that manufactured by its U.S. competition. The company is, therefore, justified in charging a somewhat higher price. So far, however, it has been unable to sucessfully tap the American market. Why? Because it has failed to establish a strong dealership network to back its product with financing, service, and spare parts. And a strong dealership network is the U.S. competition's main edge.

Other companies come to America with the impression that the entire country is one market that can be filled in a single shot—almost as if the U.S. operations were just another branch in another part of the home country. These companies not only spread themselves thin, but also pay insufficient attention to such regional differences as climate, population, income, and consumer attitudes.

For example, in an attempt to cover the entire U.S. market at once, one European manufacturer of farm equipment disregarded the fact that the soil is drier in the prairie states than it is in either the southern United States or Europe. This company is now struggling because its equipment is not doing the job—a dilemma that has necessitated costly changes and damaged the firm's reputation.

On the other hand, another foreign company—which has entered into a joint venture with a U.S. manufacturer to sell a special insulation material—is profiting from some basic market research. For this European-based business, users of stone and brick provide the most promising market. The firm discovered that although builders in America's North and Northeast favor wood, builders in the South and Southeast prefer stone and brick. Therefore, instead of trying to cover the entire country, the company concentrated its marketing efforts on just two regions. Thanks to foresight and planning, this company is doing very well, despite the depressed housing industry.

There is a clear advantage in initially concentrating on a particular promising regional market and expanding step by step into other areas once a solid base has been established.

How can a company learn where to concentrate its efforts? The best bet is to conduct rigorous, objective, and thorough market research. This can help ascertain a product's potential—whether the company is coming to the United States for the first time, expanding, or launching a new product.

Keeping the customer satisfied

Market research may be essential, but it won't get a company any results without an efficient marketing network to back it up.

A close-knit distribution network, continuous monitoring of dealer quality, and upgrading of dealer motivation and training are absolute musts for almost all products sold through dealership networks. A European company in the cleaning equipment industry learned this lesson the hard way. After establishing what was assumed to be a strong national dealership network, the company saw its sales taper off rapidly in the third year of U.S. operation. The reason? The company had not paid enough attention to the fact that U.S. dealers in its industry, unlike dealers in Europe, were typically poorly trained and thinly capitalized. The company's customers were unhappy because they could not get their equipment serviced, and many of the dealers were going bankrupt. After the company substantially upgraded sales support for its dealers, business improved.

Companies that have been here awhile have found that, almost without exception, the American customer—whether a consumer, a dealer or retailer, another manufacturer, or a government buyer—places more emphasis on price than on product features.

To succeed in U.S. markets, a company needs to be able to react faster to special customer demands than in most European countries. Therefore, it must be faster, more flexible, and more price-competitive than it must be in Europe.

While U.S. and European markets may look strikingly similar on the surface, marketing is the one area in which the most substantial differences between U.S. and European business exist. For example, a foreign marketing director for a company in the food industry steered his firm's advertising campaign to what he believed to be thirty different markets, when in fact there are about seventy markets in that particular industry in the United States. Needless to say,

How can a company learn where to concentrate its efforts? The best bet is to conduct rigorous, objective and thorough market research.

The resources of Peat Marwick include extensive computer networks.

his ad campaign was a failure.

Buying a business

Research shows that more than 50 percent of original European investments in the United States are made through acquisitions. Acquisitions are still the least expensive and fastest way to establish or expand a foreign operation. This holds true only if the acquisiton is conducted correctly. Unfortunately, a list of unsuccessful acquisitions would probably fill an entire library. How can future investors avoid a similar fate?

Unfortunately, a list of unsuccessful acquisitions would probably fill an entire library. How can future investors avoid a similar fate?

First, the target company's actual or potential problems must be investigated. Consider, for example, the continuity and motivation of the firm's present management. As a rule, every effort should be made to encourage the present management team to stay for at least two to three years after the acquisition – but there should also be a contingency plan for filling unexpected voids. As part of such a plan, the company can identify an experienced home-based person who could transfer to the United States on short notice.

Second, beware of financial and tax problems – undetected pension and other liabilities, hidden product liability cases, inability to retain LIFO inventory reserves, and excessive compensation by previous owners, just to name a few.

A third issue is whether the location of the target company will fit in with the parent firm's long-term plans. Often, the parent company finds itself far from supplies or skilled labor when it finally starts to integrate its own products into an existing operation.

It's virtually impossible to eliminate all risks inherent in an acquisition, but they can be successfully limited by taking the following measures, among others:

- Appoint an acquisition team composed of both experienced company personnel and outside advisers.
- Establish a logical set of acquisition criteria.
- Conduct a systematic search for potential targets.
- Use an acquisition checklist.
- Perform a review of the target's operational, financial, and managerial strengths and weaknesses.

What can happen without such safety measures? One company in the high technology field acquired a targeted American firm, only to discover at a later date that most of the target's inventory was obsolete.

A German company acquired a substantial U.S. operation – and substantial problems to go with it. After signing on the dotted line, the firm discovered that it was stuck with a highly unfavorable labor contract. When the new management attempted to change the contract, strikes and violence resulted.

In yet another case, a Swiss company displayed its ignorance of the U.S. tax system by

It's virtually impossible to eliminate all risks inherent in an acquisition, but they can be successfully limited . . .

failing to include appropriate protective clauses in the contract covering the target company's previous tax liabilities. The Swiss firm came close to bankruptcy when it had to pay the previous owner's taxes.

People problems

Regardless of how thoroughly planned the U.S. operations are or how superior the product, the success or failure of the business enterprise will ultimately rest on the people a company employs. This truism takes on additional significance in the case of foreign operations.

Should a company hire an American manager or one from the home company? The answer is to hire managers who are experienced in the American marketplace, regardless of nationality. The parent company should complement this experience with a well-conceived training program, to familiarize key managers with the foreign corporate culture as well as company policy, procedures, and objectives.

Of course, the manufacture or assembly of technically complex products may require the presence of a technical manager from the parent company, who will function as a liaison (but not as a plant line manager!). This individual can ensure that the parent company's technical know-how is applied to its fullest in the United States. A relatively complex manufacturing process in this country will generally require more in-house training of production personnel than would be required overseas. These training programs often can qualify to receive financial support from state and local government agencies.

A relatively complex manufacturing process in this country will generally require more in-house training of production personnel than would be required overseas.

Declaration of independence

How to run a company from a distance? That's the problem foreign companies face when dealing with U.S. subsidiaries. In many cases, for example, the legal relationship between parent and subsidiary is unclear. After establishing the subsidiary, the parent company should recognize that the U.S. operation is a legally independent entity, organized under different laws – not just a department that has been transferred abroad. If necessary contractual relationships are not established or adhered to, the results can range from a sense of misdirection and uncertainty on the part of both the parent and the subsidiary, to a decline in motivation by the subsidiary's management, to outright financial loss.

Chargeable services are one such problem area. When the subsidiary is not billed for services provided by the parent company (and vice versa), the exchange may culminate in potentially serious tax problems as well as endless arguments between the two companies. To avoid such complications, the parent should, to a large

When the subsidiary is not billed for services provided by the parent company, the exchange may culminate in potentially serious tax problems.

Managers at Peat Marwick using computer data in consultation on a client's needs.

hatch•back

\'hach-bak\ *n* [See Volkswagen Golf]

1 : A new Volkswagen that offers extraordinary versatility. 2 : A new Volkswagen that's German engineered for outstanding performance and responsive handling. 3 : A new Volkswagen that's aerodynamically designed for a surprisingly quiet ride. 4 : A new Volkswagen that seats a family of five comfortably. 5 : A new Volkswagen that carries up to 40 cubic feet of cargo.† 6 : A new Volkswagen that's built to last, and backed by Volkswagen's new 2-year Unlimited-mileage Protection Plan. 7 : A new Volkswagen that'll undoubtedly soon be copied.

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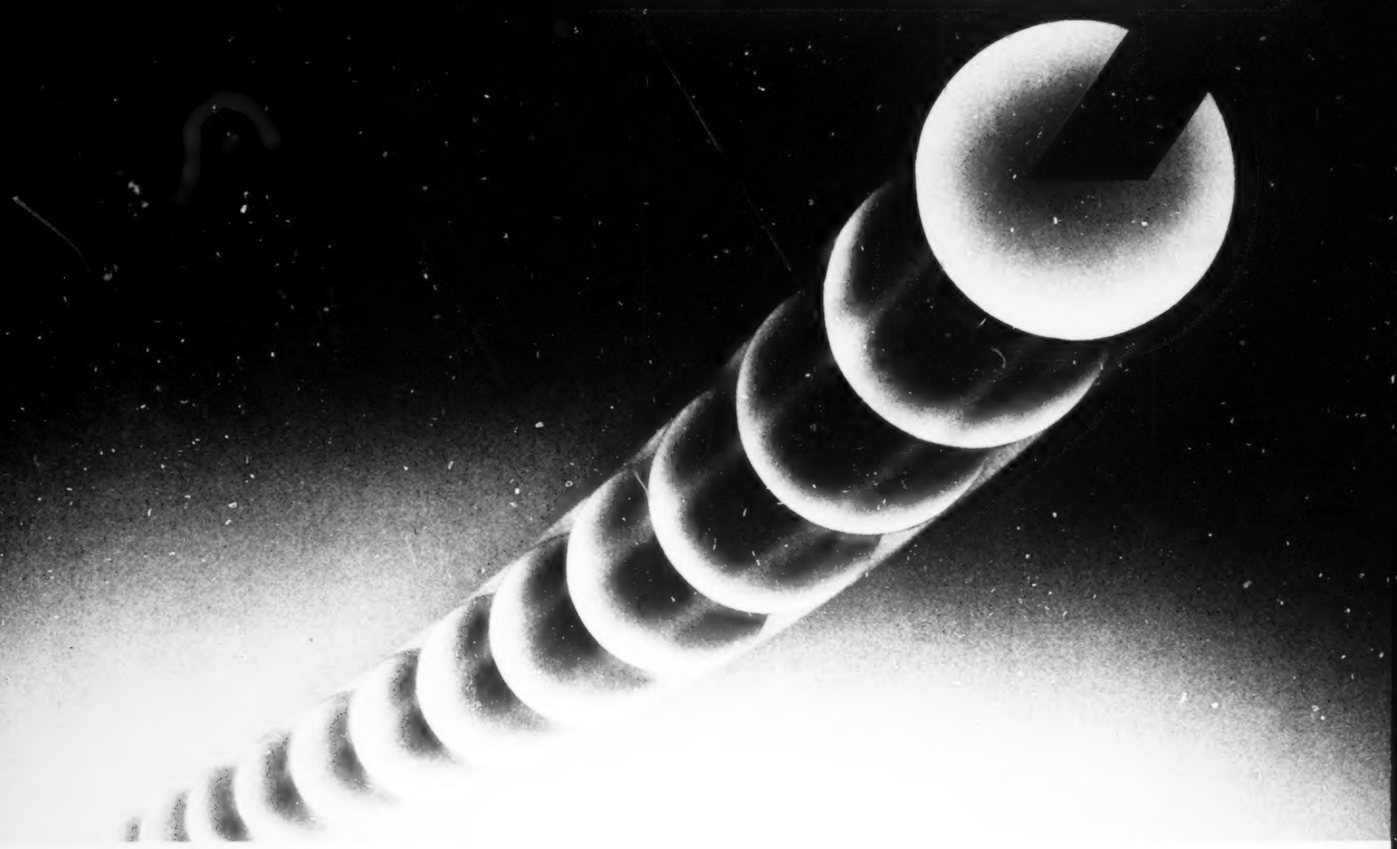
DG BANK: SUCCESSFUL IN 1983. CONFIDENT FOR 1984.



Comments by the Chairman, Mr. Helmut Guthardt, in the 1984 Annual Shareholders' Meeting.

"For DG BANK and its Group, the year under review has been a successful one – as can be said for the whole German cooperative banking system (for which DG BANK acts as central bank, liquidity manager, and international arm)…

"In 1983, the Group's total assets grew by 11.6 percent to almost DM 77.7 billion (equivalent to U.S. $28.5 billion)…

"The Group's loan portfolio increased by 15.7 percent to DM 62.3 billion (U.S. $22.8 billion)…

"International loans and money market deposits, at DM 14.0 billion (U.S. $5.1 billion), were up by 9.4 percent…

"Net interest earnings benefited from the fact that the rates for the Bank's resources declined faster and more markedly in 1983 than the rates for our assets. In conjunction with larger volume, this led to an increase in net interest earnings by more than 50 percent for the Group and by almost 60 percent for DG BANK…

"In our securities business, the number of orders executed for clients was 60 percent higher than in 1982. For German shares in particular, we recorded a sizeable increase of orders from our international clientele. In the field of new issues, the Bank lead-managed two domestic issues and acted as lead manager or co-manager for 31 international issues. Our international commercial services also recorded a gratifying increase in net fee income…

"These results again enabled us to increase substantially provisions for loan risks, mainly country risks…

"The Group reports – as for the previous year – an after-tax profit of DM 100 million (U.S. $36.7 million). Another DM 70 million (U.S. $25.7 million) have been allocated to published reserves. We propose that the remaining profit be distributed as an (unchanged) dividend of 5 percent (tax-free for the recipients on account of the Bank's legal status as a public corporation)…

"Shareholders' equity, after an increase in the Bank's capital by DM 200 million to DM 766 million during the year under review, now amounts to more than DM 1.4 billion (U.S. $518 million) or 3.2 percent of the Bank's total footings – a ratio which we consider to be adequate in view of the fact that our balance sheet structure in part reflects our role within the German cooperative banking system (with consolidated assets of DM 443.2 billion – equivalent to U.S. $162.7 billion – at year end 1983)…

"Activities and projects for the current year include plans to establish a securities brokerage firm in New York – in recognition of the substantial interest of our clients in the American stock market – and a merchant bank in Singapore which is to supplement the services of our branch there…

"The Groups' net operating profit for the first four months of 1984 was 12.5 percent above the 1983 average, including trading profits…

"Barring unforeseeable changes in the international situation I am confident that DG BANK and its Group will be able to match last year's result in 1984…"

Copies of the 1983 Annual Report and Accounts for DG BANK and its Group may be obtained from:

Head Office: DG BANK, P. O. Box 2628,
Wiesenhuettenstrasse 10, D-6000 Frankfurt am Main 1, Federal Republic of Germany,
Telephone: (69) 2680-1, Telex: 412291.

Offices: New York, Los Angeles.

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extent, treat the subsidiary as an independent third party. All parent-subsidiary dealings that may have legal and tax implications should be well documented – and conducted at arm's length. This practice can prevent possible financial losses and ensure that both the parent and the U.S. management agree on and chart a course – and can expect smooth sailing.

"...internal and external financial reporting serve not only as a 'red flag' but also as a control mechanism"

Financial reporting

For foreign investors, internal and external financial reporting serve not only as a "red flag" but also as a control apparatus, a guidance mechanism, and – perhaps most importantly – as a way to measure U.S. management's performance against that of the parent and other foreign subsidiaries.

However, foreign investors are often confused about whether to use U.S. accounting principles, U.S. tax regulations, foreign accounting principles, or some other set of internal accounting instructions in preparing the subsidiary's financial reports. And other complications arise when foreign currency fluctuations are not properly accounted for in measuring the subsidiary's performance.

. . . foreign investors are often confused about whether to use U.S. accounting principles, U.S. tax regulations, foreign accounting principles, or some other set of internal accounting instructions.

To ameliorate these problems, foreign investors need simple and speedy financial reporting (with speed taking precedence over accuracy when necessary). The emphasis should be on highlighting significant deviations from budget – including the impact of foreign currency rate changes. But since rate changes are beyond the subsidiary management's control, they should not reflect upon operating performance.

Under no circumstances should the choice of accounting principles affect the taxpaying entity's efforts to minimize taxes. Foreign investors must consider every tax option. For example, the liberalization of the LIFO conformity rules for U.S. tax purposes should make the tax-saving LIFO method of valuing inventories an attractive alternative for many foreign-owned firms.

Use of outside advisers

Foreign managers seem more reluctant than Americans to use outside consultants to help solve business problems. Perhaps this reticence stems from the belief that consultants are terribly expensive.

Foreign managers seem more reluctant than Americans to use outside consultants to help solve business problems.

The four major mistakes foreign investors make when it comes to hiring U.S. consultants are the following:

- They retain consultants too late in the game to make the most effective use of them. A foreign company already had suffered two years of heavy operating losses before it decided to hire a marketing consultant. The moral: Spend on a consultant early and save in the long run.
- They don't understand the protective language that is found in almost every document prepared by outside advisers. This is one of the costs of doing business in the litigation-leery United States. Unfortunately, overseas investors often find such language unacceptable. Since such phraseology is, in fact, necessary, it is important for the foreign investor to gain up-front knowledge of the legal environment and ethical constraints within which U.S. advisers generally operate.
- Most foreign investors (and, incidentally, many American businessmen) think outside advisers' fees are inordinately high. The best advice is never to hire a consultant without obtaining a written cost estimate for the work. Often consultants' work can be structured on a modular or step by step format which helps the investor to take stock of the benefits, direction and costs of the work at key points.
- Foreign investors often find that the recommendations presented by consultants are not the ones they had expected. Therefore, before hiring a consultant, they should discuss and define the scope and objectives of the project. Chances are that once the

work is properly delineated, the consultant will be able to address the issues at hand efficiently and constructively. The written fee estimate should include all other important aspects of the contractual relationship with the consultant, such as timing, makeup of the consultant's team, and use of periodic progress meetings.

Prognostications

Many people who advise current and prospective foreign investors see the following trends arising and continuing for the next two to three years:

1982 and 1983 have seen decreases in the rate of growth of foreign investment in the United States. However, increasing protectionist measures and the relative strength of buying power of the U.S. market continue to make the United States undeniably attractive to the foreign investor. As the U.S. chronologically leads the world out of its economic downturns there is obvious profit in meeting renewed waves of economic activity as they arise.

Other major trends with which we are all familiar are: protectionism which encourages direct foreign investment; economic interdependence which facilitates it; and a growing appreciation of the concept of sustainable growth which helps to align American short term profit orientation with the foreign investors longer term orientation.

We've all. . . heard many words regarding the evil of protectionism.

While we've all read newspaper articles and seen TV reports on the economic summit meetings of the major world powers around the world and have heard many words regarding the evil of protectionism, the fact is that human nature has taken over. By that I mean the instinct for self-preservation. 1984 has seen a significant rise in all means of protectionism and this is having a major impact on international business.

This development is not a surprising one, however, since the leaders of individual countries have no other means at their disposal to withstand the onslaught of criticism they are getting from their own citizens with regard to the impact of the recent recession on them. As a result, protectionism in all forms is an economic fact of life that is negatively impacting business seeking to operate and expand internationally.

Economic interdependence is becoming a fact of life and not even major countries like the United States, Germany, the U.K., Japan, France and Italy can escape the reality that we're not independently in charge of our own destinies from an economic standpoint. The interesting thing about interdependence is that it makes protectionism difficult to pursue.

The fact that countries are economically interdependent takes away from any country the ability to use protectionism in an effective way. In a sense, economic interdependence is a plus for multinational companies to the extent that it blunts the power of countries to be protectionistic. On the other hand this blunting of protectionistic power is a minus to individual international businesses when trying to protect their home market or niche in a foreign market from another country's influences. While some U.S. based companies are still encouraging Washington to protect their non-competitiveness, many more are now making the transition to meeting the competition.

Given the recent hardships that the economic recession has worked on people around the world, many are not looking for dramatic results but rather steady, sustainable results. One recent testimonial to that in recent months has been the way in which the stock market in the United States has gone up upon hearing the news that the growth in the economy is slowing down. In past years this would have resulted in a decline in the stock market. Now it represents the phenomenon of sustainable growth beginning in the United States. I guess if we are looking for a catch phrase here the term "steady as she goes" best describes this development.

The stock market in the United States has gone up upon hearing the news that the growth in the economy is slowing down.

Small and medium-sized companies in the manufacturing industries will continue to come to the United States as new investors.

Because they are less familiar with the peculiarities of foreign investment and lack sufficient experienced in-house staff to deal with specific problems, these companies, if they are not careful, will be likely to repeat the mistakes of their predecessors.

Service industries such as insurance and banking, as well as retailing, will continue to invest here.

There will be more joint ventures combining foreign expertise in high technology and manufacturing with U.S. marketing knowledge.

Companies that have come to the United States for political reasons (for instance, because they believe it is no longer safe to invest in certain parts of Europe) will continue to be an endangered species, because they often will lack an economic reason to succeed here.

Many of the foreign companies that are presently selling imported goods will mature in this market and move into assembly and manufacturing operations. In doing so, they will be attempting to show sizable American customers a commitment to U.S. operations, to counteract what is perceived by many to be a growing trend toward protectionism (with its attendant restrictions on imports) and to become

WICHTIGE MITTEILUNG
des Gouverneurs von OKLAHOMA, U.S.A. an alle Geschäftsfreunde in der BUNDESREPUBLIK DEUTSCHLAND

WILLKOMMEN!

Die Auslegung der Verfassung des Bundesstaates Oklahoma durch den Justizminister dieses Staates im September 1979 fand weitgehende Beachtung. Nach seiner Lesart verbietet die Verfassung von Oklahoma ausländischen Anlegern den Erwerb von Grundbesitz in diesem Staat.

Da in vielen amerikanischen Bundesstaaten ähnliche Gesetze herrschen, schien die Möglichkeit für ausländische Geschäftsleute, in diesen Staaten Eigentum zu erwerben, in Frage gestellt.

Fur Oklahoma wurde diese wichtige Frage durch sein oberstes Gericht in folgendem Entscheid geklärt:

Die Verfassung von Oklahoma erlaubt ausländischen Anlegern den Kauf von nicht landwirtschaftlich genutztem Grund und Boden, wenn ihr Unternehmen oder Geschäft in Oklahoma eingetragen ist. Eine ausländische Firma gilt dann als eingetragen, wenn sie einen in Oklahoma eingetragenen Firmennamen hat. Die Eintragung unterliegt keinen besonderen Bedingungen.

Als Folge dieses Gerichtsentscheids hat die Regierung von Oklahoma beschlossen, ausländische Investitionen in Form von Grundbesitz durch umfangreiche Programme zu unterstützen.

Ich möchte nur zwei Punkte besonders herausstellen:

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Für weitere Auskünfte wenden Sie sich bitte an das Oklahoma Economic Development Department (Behörde für Wirtschaftsentwicklung) oder an die Deutch-Amerikanische Handelskammer.

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Alle Anfragen für Information werden vertraulich behandelt. Senden Sie bitte diesen Coupon mit Ihrem Namen und Ihrer Adresse an: Director, International Division, Industrial Development Department, Suite 303 P.O. Box 53424, State Capitol Station, Oklahoma City, Oklahoma, U.S.A.

OKLAHOMA — Der gewinnbringende Staat

Most of the companies stated that while they took longer than they originally planned to get where they wanted to be, once they had progressed past the start-up phase they were pleased to find that their results and achievements far exceeded original expectations.

less dependent on the volatile foreign exchange markets.

Companies that have been here for a number of years will increase their U.S. investments. They will start to experience the problems of American companies rather than of foreign ones. New problems will crop up as these maturing companies begin to buy more of their supplies from American companies – including supplies of only marginal quality, late deliveries, and increased prices due to small orders.

While the number of foreign workers in the U.S. will increase, their relative share in the pool of total employees of foreign-held companies will decrease as they are gradually replaced by Americans.

A shakeup of U.S. subsidiaries that consistently lose money may be expected, as their parent companies lose patience and reduce or cut off additional infusions of capital.

A proportionately larger share of foreign investors, both established and new, will continue to flock to the Sun Belt states. However, as industrial development in the Sun Belt matures, as labor rates there rise, and as the area becomes more attractive to unions, it is likely that the midwestern and northeastern states, with their traditional pool of skilled labor, well-developed infrastructure, and nearby markets, will be at least partially rediscovered.

Perhaps the most optimistic note on the future is this: of the 40 foreign companies interviewed for this article, all of those that have been here for some time have significant expansion plans for their U.S. operations. Most of the companies stated that while they took longer than they originally planned to get where they wanted to be, once they had progressed past the start-up phase they were pleased to find that their results and achievements far exceeded original expectations.

We hope the issues raised here will help both German and American business people to work together, furthering their own interests and strengthening the German, U.S. and world economies. ■

DEUTSCHE ZUSAMMENFASSUNG

O'Connor weist in seinem Beitrag u.a. auf typische Fehler hin, die von auslaendischen Investoren in den USA gemacht wuerden. Ein Kardinalfehler sei die irrige Annahme, dass erfolgreiche Produkte in Europa oder in Japan auch gleich in den USA gute Ergebnisse zeigen muessten. O'Connor, der rund 40 Firmen, vornehmlich im Osten und im Mittleren Westen der USA, befragt hatte, schildert in diesem Zusammenhang die schlechten Erfahrungen einer deutschen Firma, die ein im Vergleich zur Konkurrenz offensichtlich technisch hervorragendes Produkt nicht auf dem amerikanischen Markt plazieren konnte. Der Grund hierfuer sei letzlich ein fehlendes, gut ausgebildetes Haendlernetz gewesen. Ein solches starkes Haendlernetz sei mitentscheidend fuer den Konkurrenzkampf auf dem US-Markt. Einen weiteren Fehler, den verschiedene auslaendische Unternehmen machen, sieht O'Connor darin, dass diese meinten, den US-Markt in einem einzigen Streich erobern zu koennen; gleich so als seien Operationen in den USA nichts anderes als das Betreiben einer Zweigniederlassung irgendwo in einem anderen Teil der Heimat.

Die entscheidende Voraussetzung fuer Erfolg, namentlich fuer Unternehmen, die zum ersten Mal in den USA vertreten sind oder neue Produkte starten wollen, sei eine objektive Marktuntersuchung. Auch muessten sich die Firmen darueber im klaren sein, dass sie in den USA gezwungen seien, schneller auf die Kaeuferwuensche zu reagieren als in Europa.

Eine weitere Klippe fuer auslaendische Investoren sieht O'Connor in den grossen regionalen Unterschieden der einzelnen Teilmaerkte der USA. Diese reichten vom stark voneinander abweichenden Klima bis hin zu sehr unterschiedlichen Verbrauchergewohnheiten.

Zu dem sich abzeichnenden Trend von Industrieansiedlungen im Sonnenguertel der USA meint O'Connor, dass dieser Bereich mit wachsenden Arbeitsplaetzen auch fuer die Gewerkschaften mehr und mehr attraktiver werde. Fast scheine es so, dass die Unternehmen sich wieder zurueckbesinnen wuerden auf den Mittleren Westen und die Staaten des Nordostens mit ihrem traditionell gut ausgebildeten Arbeitskraeftepotential, der wohl ausgebauten Infrastruktur und den nahen Maerkten.

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Musikmesse Frankfurt
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Orchestral Electronics
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International Trade Fairs for Consumer Goods
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19 -23 3 1985

interstoff

53 interstoff
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International Data Bank Congress and Exhibition
7 - 9 5 1985

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21 st Exhibition Congress
9 -15 6 1985

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IAA

51 IAA
International Motor Show
12 -22 9 1985

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International Trade Fair for Environmental Design
5 -8 10 1985

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FBA

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15 -18 10 1985

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Venture Capital: Financing the New Ideas of a Changing World— A U.S.-German Perspective

by Charles F. Bacon
President of Consortia, Inc.
Boulder, Colorado

The term Venture Capital entered the world's lexicon only over the past 25 years. In that time, Venture Capital has been a primarily North American business phenomenon, concentrated early on in the primary regional centers of entrepreneurial activity, Route 128 in Massachusetts and Silicon Valley in California, and more recently the Front Range region of Colorado.

The Colorado focus is especially important in understanding modern trends in the development of the Venture Capital industry, which is growing faster in this region than anywhere else in the U.S. Chart I shows that new venture capital firms were founded at a faster rate in the Mountain region than in any other area of the U.S. Edging out even the West Coast, the previous leader, in expansion of number of firms. And the increase in the amount of venture capital funds under management in the Mountain region developed at a rate second only to the West Coast area. Colorado is also ranked the fifth state in the nation in the amount of venture capital invested.

Rocky Mountain Region Venture Capital Industry

	1977	1983	INCREASE
Venture Firms	24	82	3.42
Venture Funds Under Management ($mm)	113	759	6.72

Source: Venture Economics, Inc.

Colorado has the highest education level per capita in the U.S. Over the past 25 years, the number of new high technology firms has doubled in Colorado every 5 years. Colorado is the fourth largest technology center in the U.S., with more than four times the national average in high technology manufacturing, and has the second largest state workforce employed in the engineering sector.

The rate of development of start-up companies in the region is increasing at the highest rate ever. Seven of the ten fastest growing states in the U.S. during the 1980's are in the Rocky Mountain region.

The region continues to outperform the nation in growth in personal income, retail spending, housing starts, and nonresidential building, and the Mountain region also had one of the two lowest business failure rates in the country during every year of the 1970's except in 1975, when it was number three.

The rate of development of start-up companies in the region is increasing at the highest rate ever. Seven of the ten fastest growing states in the U.S. during the 1980's are in the Rocky Mountain region.

All of these factors point to Colorado's position at the leading edge of the explosive growth in new entrepreneurial activity, the single most

Denver Skyline

important ingredient of Venture Capital.

The Venture Capitalist has the knowledge, creativity and patience to work with entrepreneurs through the difficult and time consuming process of an emerging enterprise. Venture capital can be defined as value-added financing for entrepreneurs, supporting the organization not only with financial resources, but catalyzing the all-important infrastructure linkages with technology, government, education, banking, accounting and legal resources.

The Venture Capital industry has grown enormously, especially during the last few years, as indicated in the following table:

Venture Capital Industry Pool of Capital
($ millions)

	1977	%	1983	%
Independent Private Funds	887	35	8,157	68
Venture Capital SBIC's	612	24	1,365	11
Corporate	1,022	41	2,554	21
Total Pool	2,521		12,076	

Source: Venture Economics, Inc.

Germany has historically been a primary focus for financial systems change.

We are now starting to see transfer of the Venture Capital process to other areas of the world, such as Germany, the United Kingdom, and Japan, as a means of fostering industrial growth.

Germany has historically been a primary focus for financial systems change.

Mayer Amschel Rothschild in the mid 18th century started banking intelligence from Frankfurt, networking Germany, France, Austria, Italy and Great Britain. Nathan Rothschild catalyzed the beginnings of the London banker by developing to a high art the application of the integrated knowledge of finance and politics. The "Four D's" Grossbanken integrated banking and industry and developed the Mid East, Africa and China by the late 19th century.

German finance has continued to be innovative in this century, with bankers such as Sir Siegmund Warburg from Hamburg developing his consortium with Paribas in France and Becker in Chicago, playing a key role in the networking of Europe, the U.S. and Japan, and opening up new methods through activities such as the "Aluminum Wars" and promoting the European Community and Japanese-European relations.

To understand the current trends in transfering Venture Capital from North America to the rest of the world, it is helpful to review key components of modern values.

To understand the current trends in transferring Venture Capital from North America to the rest of the world, it is helpful to review key components of modern values.

The desire of individuals to "do their own thing", and the educational level changes brought about by post World War II business school growth has significantly catalyzed social change to a highly accelerated rate, especially in the developed countries. These underlying basic conditions, coupled with the slowness of existing financial sources and channels to change to post World War II conditions, and the failure of large organizations in ability to access the new ideas produced a relative vacuum in the financial community.

Into this environment emerged a group of individuals who were prepared to take risks. Many were businessmen with excess cash who banded together to help each other. The current broker, money market man, banker or insurance company at that time were not among the first wave of venture capital investors. We see a new burgeoning group arise: The Venture Capitalists. In the era of the 1970's where venture capital money invested in almost any enterprise in California's Silicon Valley hit gold, the attraction for fast return became a magnet for pension funds, banks and other large capital pools.

The regional transfer, and growth, of the Venture Capital process is dependent on the problems inherent in large scale change.

Most critical is the problem of people. The available supply of people, with the abilities to run a business in all the various stages is always limited.

Most critical is the problem of people. The available supply of people, with the abilities to run a business in all the various stages is always limited.

While creative ideas, supported by sufficient venture capital have created many new products, the long term success of an enterprise depends upon a pragmatic team turning products into effective businesses.

The highly skilled labor force in Germany is supported by the strong programs of Social Security, unemployment insurance, national health insurance, job training, and social services, all stemming from the traditional German social values. The absence of American labor complacency in the German people shows the distinct advantage in Germany to the rest of the world of the high commitment by the German workforce. However, with these and other social factors such as the real income of German labor being significantly higher than in the U.S., and German pension programs so effective that less than 5% of retired Germans need additional aid, the development of the entrepreneurial spirit is difficult.

German value systems must expand to accept and envy the more creative elements in society in order to continue to attract innovation, both domestic and foreign.

Changing industrial systems must access new ideas, convert to more adaptable capabilities, and reduce dependence on previous economic concentrations, such as the mass production plants of the automobile, textile, and steel industries. Therefore, Germany should continue to subsidize retreating industries to support the shift to planned balancing of older resources with the new high technology industrial base. Subsidies should be increased in emerging business sectors to support development of a more competitive international presence. Private financial sources will also be necessary to balance the political influences in government supported funding programs. Personnel retraining, labor subsidies, reduction of previous and present excesses, conversion to emerging industries, private sector initiatives. . .these are some of the keys to a strong economic base in which the venture capital process can develop in Germany.

German value systems must expand to accept and envy the more creative elements in society in order to continue to attract innovation, both domestic and foreign.

Boulder Skyline and Flatirons Mountains

The multinational corporations are leading the way in international integration, and the European Common Market sets a prime example of the application of this process, with parallel rates-of-increase, monetary union, peaceful cooperation, and non-governmental interactions. The integrated regions such as the Common Market of today are becoming the mega economies of the future.

Flexible-system enterprises, which integrate the staff of an enterprise, produce community support and a balanced organization and management process.

Flexible-system enterprises, which integrate the staff of an enterprise, produce community support and a balanced organization and management process.

Germany in particular has a unique position to understand this trend. Continuously among the top 3 or 4 countries of the world, a founding member of the Common Market, and drawing support from both the Western and East Block economies, Germany has enjoyed higher economic growth, lower inflation, lower unemployment, and higher productivity growth than in the U.S. in the past 20 years.

Development of the venture capital process, in any region, is dependent on many critical factors and requirements. The venture capitalists' primary objective is to invest in those companies that will achieve the highest valuation in the shortest period of time. To do so, companies are sought out and selected that have developed elegant solutions to large problems. In assessing any opportunity, venture capitalists assign values to three factors, typically as soon as the first paragraph of the proposed business plan is read or the first three sentences of an entrepreneur's telephone call are heard. The values of Need, Solution and Entrepreneurial Team are essentially assigned and multiplied by each other to produce the company's valuation. If any factor has zero value, the company's value is zero. On the other hand, the greater the values venture capitalists can assign for these factors, the more likely the company will be invested in.

Most experienced venture capital investors place the greatest emphasis on the Need, the second on the Entrepreneurial Team and the third on the Solution.

Most experienced venture capital investors place the greatest emphasis on the Need, the second on the Entrepreneurial Team and the third on the Solution. To obtain venture capital, the Need that the entrepreneur is addressing must be large, such as disease, hunger, aging, rising cost of health care, computer literacy and so forth. In America in big Need companies, if the solution cannot succeed, the company can still go public for the value of the Need. Companies such as Genetech and Cetus were sold to an eager public market with hard earnings because the American stock-buying people like dazzling stories. However, a portfolio of only big Need, no Solution companies, where none are able to generate earnings within 2 to 3 years, would not exist for very long. The public market cannot absorb an excess of big Need, no Solution companies, and venture capitalists seek the potentially successful entrepreneurial teams with elegant Solution's to accompany the big Need's.

Exit financing is critical to the venture capital process. Over-The-Counter (OTC) markets in the U.K. and Sweden show the beginnings of the application of U.S.-style public underwriting to the European theatre. The growth of the international exchanges will also be a key factor in the international transfer of venture capital.

The detailed Venture Capital investment decision must include recognition of the following factors:

1–What Need does the new group or business address? What are the market trends, size, etc.)

2–Who are the people? At CI we believe people are the prime ingredient for success or failure. "People" includes not only technical talent, but also the recognition of a primary leader, and the recognition by the team that the leader is important.

3–An audit of the potential solution or plan to produce the Solution or mission of the company. Does it truly satisfy the Need? Is it delivered to the market efficiently?

4–A legal audit of all the contracts, stock records and minutes.

5–A financial audit of the capital invested to date and its use, margin and ratio analysis, determination of capital needed and valuation.

Venture Capitalists never try to have all the answers, but a generalist viewpoint applies tests of reasonableness to any undertaking.

Venture Capitalists never try to have all the answers, but a generalist viewpoint applies tests of reasonableness to any undertaking.

The investment objective of Venture Capital is to achieve a higher rate of return than is usually available from public equity markets by making investments in new and developing companies which the Venture Capitalist believes offer significant long-term growth potential.

Companies receiving a Venture Capital investment will normally be new or in an early stage of development. Venture Capital investments may be made in more mature companies when the possibility of exceptional capital appreciation exists. Current income to the Venture Capital Fund is not a factor in the selection of investments.

Rigid investment policies are generally imprudent in venture capital which, by its nature, requires maximum flexibility and will be characterized by the uniqueness of each investee company's situation.

In general, each investment should be characterized by competent and motivated management. Market(s) for the company's product(s) should have a favorable relationship among the variables of size, growth potential and competitive forces. The proprietary product or service must meet a need in the marketplace. Pricing of the investment should combine with prospects for liquidity in an appropriate risk/reward relationship. If a Venture Capital fund acts as a lead investor, then the situation should be one where the background and skills of the Venture Capitalists provide significant value beyond the provision of capital.

While a deficiency in any one or more of these attributes will not necessarily disqualify a company as a potential investment, these are the criteria that will be emphasized in reviewing each situation. Negative characteristics which, if present, would also adversely affect the investment decision are: a highly capital intensive project; dependence upon a single sector of the economy; or a project orientation versus a product orientation.

Consortia, Inc. believes that a new differentiation lies in its direct combination of venture capital and operating experience, both resident

Unlock potential.

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KRUPP

Rigid investment policies are generally imprudent in venture capital which, by its nature, requires maximum flexibility and will be characterized by the uniqueness of each investee company's situation.

in the venture capital management team, and available through a large network of generalist and specialist resources. In every investment CI operates as an integrated group. This asset is leveraged by investing in opportunities where our venture capital funds' management will be able to enhance the value of our investment by utilizing the skills and experience of our people.

Large-scale adjustments and creation of new financial methods, instruments and channels are critical to maintaining continuous growth. Venture capital has come of age in the U.S., and will provide a key role in the changing economic systems of the world, transferring first to the more industrialized nations, and more slowly to the developing regions. With a strong social, government and business systems base, the German economy can produce a strong venture capital sector by developing an entrepreneurial spirit and a forward-looking financial spirit. ■

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DEUTSCHE ZUSAMMENFASSUNG

Bacon erinnert daran, dass der Begriff Venture Capital erst seit 25 Jahren in den Lexika steht. Zunaechst sei Venture Capital ein typisches amerikanisches Phaenomen gewesen, das sich anfangs vorrangig in Massachusetts und im kalifornischen Silicon Valley entwickelt habe. Neuerdings aber habe sich die Hauptentwicklung mehr auf Colorado verlagert, schreibt Bacon. Nirgendwo in den USA wachse die Venture Capital-Szene so schnell wie in Colorado. In den letzten 25 Jahren habe sich in dieser Region die Zahl der high tech-Firmen mehr als verdoppelt. Im weiteren Verlauf seines Artikels geht Bacon dann auch auf die Moeglichkeiten des Ausbaus der Venture Capital-Szene in Europa, insbesondere der Bundesrepublik, ein.

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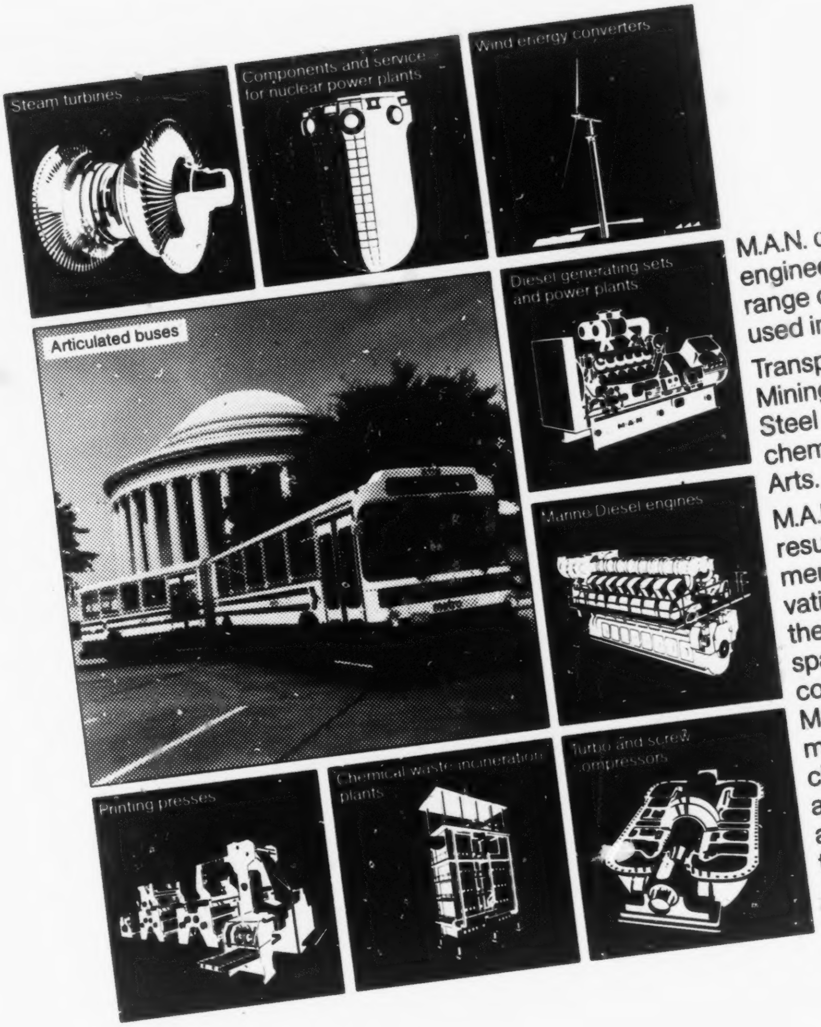
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Was ist bei der Auswahl eines Managers fuer das Auslandsgeschaeft zu beachten

Do's and Dont's in Selecting Managers for Foreign Operations

by Fortunat F. Mueller-Maerkl
Partner,
Egon Zehnder International, Inc.

Recently we heard the harrowing story of an American consumer goods manufacturer trying to set up operations in Germany:

> "It started out so logically. We wrote a comprehensive action plan and timetable to organize our entry into the market. It was conservative, or so we thought. We had purchased the plant and ordered most of the equipment by May, and gave ourselves until November 1 to be up and running.
>
> "Well, logic or no logic, it was a disaster. The executive contract situation over there is insane. We had decided to hire German nationals for a number of key positions, but they were boxed into their current jobs for what seemed like eons – they could give six months notice only at the end of a certain fiscal period – I never quite figured it out. Anyway, after looking at local candidates for a month, we realized we couldn't wait much longer, so we brought over someone from our West Coast office to get things moving. We picked him because he had been stationed in Kaiserslautern for a couple of years with the U.S. Army and spoke German. We were sure he would be the catalyst.
>
> "But, he was miserable. Apparently his American style of decision-making – long hours on the telephone, snappy meetings and business over cocktails – didn't get him very far. Hiring a secretary took him almost two months, and production and support people took even longer. He may have envisioned long weekends in the Alps, but what we all got was a headache. The plant didn't deliver product until mid-February, and he quit soon after."

Unfortunately, the story is a common one – on both sides of the Atlantic.

Executives who should know better assume that all nationalities work within a framework of common cultures and business practices.

Instant communication of information, supersonic travel and the emergence of international financial institutions have created a global economy. Both small companies and multinationals must be able to manage, influence and understand people around the world: employees, customers, suppliers, competitors.

Yet this economic interdependence does not translate into a common "business culture." We are not all playing with the same deck of cards. As our friend above learned the hard way, "logic" in America may not be the same as "logic" in Germany. . .or anywhere else.

Business standards and practices reflect the cultures in which they are rooted. Their nuances vary widely by continent, by country and even

The executive contract situation over there is insane.

by region. The informal American approach to business relationships, per the example above, is not effective in Germany, where only family members call each other by first name.

Confusing a world economy with a world culture leads to lost opportunities, time and money.

An executive with no cross-cultural experience can, regardless of other professional credentials, unwittingly wreak havoc with corporate plans overseas. The ability of a company to succeed in another country rests heavily on the manager's ability to function in its culture.

. . .cross-cultural expertise is one of the most elusive and valuable executive qualifications.

After 10,000 executives searches worldwide, we've found that cross-cultural expertise is one of the most elusive and valuable executive qualifications. We've also learned that too few companies understand the critical nature of this element in establishing a foreign subsidiary. Most do not take the proper steps to maximize their human investment in the "sub's" success.

Again, the mistakes are not confined to one side of the Atlantic or the Pacific. Managers of all nationalities make them. In an effort to clarify the selection process, we've put together the following guidelines for hiring managers for positions abroad.

DO: Promote from within, all other things being equal.

You may be startled that an executive search consultant would give this advice, but the reason isn't that surprising. In choosing any employee, it's important to minimize risk. Hiring from within meets that goal.

First, existing employees already have a working knowledge of the corporate culture. The second reason relates to the answer companies often give when asked why they are turning to outside sources: "no one on our payroll now is qualified."

While that may be true, it's important to remember that you know both your staff's strengths *and* weaknesses. Generally you will only see a new person's strengths, which can make him or her seem considerably more appealing. Unfortunately, their drawbacks—and all managers have them—may not become evident until after a critical decision is made.

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These factors should be considered when filling any position, and they are particularly critical for overseas assignments. Communications between a headquarters and foreign subsidiary are vastly more complex than those within a single office or several offices in the same country. A new hire who is not yet sure of proper protocol within the company will have a difficult time—even before difficult cultural elements enter the equation.

Therefore, all things being equal, promote from within. But, as a corollary:

DON'T: Favor an insider over someone from the outside who is clearly more qualified.

You cannot afford to cut corners on managerial quality. Experience in the relevant functional discipline and geographic environment is a must—not a hope—for your new manager. Draw up a position description which outlines the qualifications and characteristics required. Review your own people against those benchmarks and, if no one measures up, don't be afraid to look outside.

Never use management of the subsidiary as a reward for *past* performance unless the individual has the proper credentials for the *new* assignment. It's not enough to conclude that "Harry's been doing a good job lately, and he's always liked London (or New York or Berlin)." That approach can be treacherous and costly.

DON'T: Be blinded by language fluency.

This sword cuts two ways. First, just because a candidate is fluent in the tongue of the country where the subsidiary will be located does not mean the individual is the best person for the job. Technical and managerial skills are much more important attributes. If you hire someone on the basis of language fluency alone, your company will be better able to run a local Berlitz franchise than a production line.

People who speak the same language arrive at a feeling of mutual trust.

Second, decision-makers tend to favor candidates fluent in their own tongue. For example, an American interviewing German nationals may be much more comfortable with the one which speaks English best. That's natural because people who speak the same language arrive at a feeling of mutual trust much more quickly than people who don't. It's also a trap because the real issue, again, is the professional qualifications of the candidate. If you have difficulty understanding the candidate, have someone who knows their language speak with them to review their credentials and competence.

DO: Assess the candidate in terms of the total environment.

Functional skills are the most important qualification, and often the simplest to evaluate. You can quickly determine which candidates can "do the job" by comparing resumes and making reference checks.

But knowledge of the international business environment is also critical. A candidate's country of birth is not as important as one might think in this regard. An internationally-oriented Dutchman, for example, may be a better choice to run an American subsidiary in Germany than a German who's never been out of the country.

In fact, Scandinavians, Dutch and Swiss seem to be disproportionately represented in international business positions. Their small countries have limited domestic markets, which forces firms to seek foreign outlets for trade. As a group, these executives reflect an outlook more European than nationalistic.

Regardless of nationality, the right candidate will have a high 'comfort factor' in the cultures of both the parent and the subsidiary. An executive working in the Pennsylvania subsidiary of a German company should be equally at ease with Philadelphia baseball scores and the soccer results in Munich. The same principle applies to business practices. The executive needs a working knowledge of labor negotiations in America and executive employment contracts in Germany. The former is necessary for him to manage his employees, the latter to understand his superiors.

The executive needs a working knowledge of labor negotiations in America and executive employment contracts in Germany.

DO: Be willing to compromise on certain conditions of employment.

Terms of employment vary widely from country to country, so if there's a rule, it is "Thou Shalt Compromise."

Problems stem from differing expectations. Employment contracts are rare in the U.S., so the concept of more than two weeks notice is literally "foreign." An American hiring in Europe will be frustrated by the fact that 90% of the candidates have contracts specifying six months notice. The American is accustomed to fast action and quick results. Corporate strategy and/or market niches can change drastically within even three months.

Germans hiring Americans have to make adjustments too. To the U.S. executive, a three-year employment contract seems like an invitation to indentured servitude. How to solve this potential conflict? Look at each case as unique; stay willing to compromise once you've found the person you'd like to hire.

One remaining caveat for non-U.S. employers: don't give away too many benefits to a new American manager until you find out what the individual expects. Six weeks of vacation in Germany may be standard, but the American may be satisfied with two or three weeks, the U.S. norm. Similarly, to many Americans, a company car is a luxury, not a necessity as it is on the Continent.

DON'T: Literally translate pay scales.

Fluctuating currency markets are making the determination of compensation levels a particularly thorny issue. As long as the dollar is strong, the literal translation of a European salary into a U.S. currency equivalent would leave the European at a severe disadvantage. Several years ago, the situation was reversed.

There's no easy way out of this dilemma. Some companies and consulting firms have established standard-of-living indices for different cities, but few of these are helpful because they are based on varying criteria. Plus, they fail to take cultural differences into account. A Spaniard may take inexpensive household help for granted, but find the cost of similar services prohibitive in New York. Conversely, Americans accustomed to apartments with several baths would pay dearly for those facilities in Madrid. Mechanistic systems derived from these indices are wishful thinking ungrounded in economic reality.

The critical measure to consider in salary determination is the one fundamental law of economics: supply and demand. Compensation should be set in accord with prevailing standards in the country where the executive will operate. Salary levels in other countries are immaterial. There are no set formulas to make these determinations, but executives or consultants with a working knowledge of European and American salary levels can provide a sensible range for a given position description. That range can then be adjusted to your budget and the candidate's requirements.

Americans seem to have an almost obsessive need to compare salaries within their company industry and function. This attitude can be puzzling to Europeans who rarely discuss personal monetary concerns. One reason Europeans can be flexible with compensation and benefit packages is that their more "close-mouthed" society gives them more leverage in negotiations.

DO: Be flexible concerning benefits and other perks.

Performance pay and other benefits also

Compensation should be set in accord with prevailing standards in the country.

To the U.S. executive, a three-year employment contract seems like an invitation to indentured servitude.

reflect differing expectations. In the U.S., bonuses and other non-salary compensation is usually based on the executive's ability to meet short-term, often quarterly performance standards. In Europe and Japan, executives are accustomed to working with much longer-term goals.

This difference in orientation, coupled with distinctly different practices, can create problems for executive compensation packages. For instance, stock options have become a common method of rewarding key people in U.S. public companies. These programs typically allow key executives to purchase the company's stock at a discount, giving them an ownership stake that costs the company little.

But the practice does not travel well. In many instances, American executives may have accumulated thousands of dollars worth of stock through these programs. If, then, the American overseas manager expects equivalent compensation from a private European company, it would translate into a sizeable cash outlay.

Keep in mind that mortgages are structured differently in the U.S.

Other benefits, such as relocation costs and insurance, can be equally troublesome. Keep in mind that mortgages are structured differently – in the U.S., they're fixed rate, as opposed to variable rate in Europe. As a result, an American relocating out of the country may expect a mortgage rate differential allowance, an upfront payment that wouldn't be necessary in relocating a European. Another example is health and medical insurance – in the U.S., it's a "given," so be sure to take that into account in a benefit package for an American.

Snags in benefit negotiations *can* be solved. The key to satisfaction for both parties is an ability to keep their overall goals – "the big picture" – in mind when dealing with the individual elements of compensation packages. It also helps to have somebody at hand during negotiations who has a thorough understanding of the situation and its ramifications.

DO: Maintain your corporate culture.

If your company is comfortable with a certain corporate culture, personality or decision-making style, don't ignore that element in your hiring decision. Pay attention to personal chemistry. A company with a well-defined corporate structure should not hire a freewheeling entrepreneur, and vice versa.

Chemistry is important when there is a geographic spread between the employee and headquarters.

In fact, chemistry is even more important when there is a geographic spread between the employee and headquarters. We can't stress too often that since long-distance communications are inherently more tricky, it is imperative that the employee have a close understanding of 'the way things are done' and what's expected of him. This includes the 'unwritten rules' as well as the written ones.

DON'T: Believe anyone who says that business concerns transcend culture-specific practices, styles and beliefs.

All cross-cultural business enterprises require a healthy dose of sensitivity and flexibility. You must respect the differences and try to eliminate the misunderstandings they can cause. If you do so, your efforts will be rewarded with a smooth-running operation, clear communications and a strong sense of mutual trust. ■

DEUTSCHE ZUSAMMENFASSUNG

Mueller-Maerki schildert die vielartigen Schwierigkeiten bei der Personalauswahl, die sich deutschen und amerikanischen Unternehmen im jeweils fremden Land stellen. Nur zu oft gingen die Firmen in Unkenntnis der jeweiligen Landesgepflogenheiten vor allem bei der Einstellung ihrer leitenden Angestellten von falschen Voraussetzungen aus. Dies gelte fuer zahlreiche Bereiche des Personalsektors. So kaemen beispielsweise Amerikaner haeufig mit den langen deutschen Kuendigungsfristen nicht zurecht. Andererseits stiessen deutsche Unternehmen, die solche Gepflogenheiten in Amerika aufrechterhalten wollen, vielfach auf Ablehnung. Zahlreiche amerikanische Manager wuerden Kuendigungsfristen von mehr als einer Woche ablehnen, weil sie darin eine "Knechtschaft" sehen. Auch hinsichtlich des Gehalts gebe es deutliche Unterschiede. Amerikanische Manager erwarteten in der Regel fuer Erfolge des Unternehmens vielfaeltige Extraverguetungen. Dafuer wuerden sechs Wochen Urlaub, wie er in der Bundesrepublik ueblich sei, oder ein Dienstwagen sehr oft als reiner Luxus angesehen. Drei Wochen Urlaub seien in den USA die Norm.

Die lange vertragliche Bindung der deutschen Mitarbeiter ist nach Einschaetzung von Mueller-Maerki fuer viele amerikanische Firmen oft ein grosses Hindernis in Europa. Die US-Unternehmen seien es gewoehnt, kurzfristig—wenn noetig sogar innerhalb von drei Monaten—ihre Unternehmensstrategie voellig zu aendern, wenn dies der Markt erfordere.

Bei der Auswahl von leitenden Angestellten fuer Auslandstoechter empfiehlt Mueller-Maerki, dem Mann mit Auslanderfahrung moeglichst den Vorzug zu geben. In jedem Fall aber seien die technischen Fertigkeiten und die Fuehrungsqualitaeten des Bewerbers weitaus hoeher zu bewerten als etwa die fliessende Beherrschung der Landessprache am Standort des Tochterunternehmens. Wer einen Manager nach seinen Sprachkenntnissen aussuchen wolle—so Mueller-Maerki—, der sollte lieber eine lokale Zweigneiderlassung der Berlitz School eroeffnen als ein Produktionsunternehmen zu starten.

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Germany's foremost Merchant Bank had an excellent year in 1983.

Highlights from BHF-BANK's Annual Report 1983

Consolidated Figures	in million DM
Loans to customers	**14,170**
Total deposits	**13,665**
Bonds issued	**7,582**
Shareholders' equity and reserves	**681**
Total assets	**23,113**

The complete Annual Report in German and summarized Annual Reports in English, French and Spanish are available on request.

Managing Partners:
Dr. Wolfgang Graebner, Wolfgang Strutz, Klaus Subjetzki, Rüdiger v. Tresckow.

BHF-BANK, West Germany's leading Merchant Bank, achieved solid growth in all areas in 1983, with notable gains in international business.

Significant expansion was attained in every sector. Loan volume increased by 5.6% to DM 20 billion, and the balance sheet total rose by 9.5% to DM 23.1 billion. Specialized merchant banking services – such as foreign exchange trading, portfolio management, and mergers and acquisitions – increased considerably.

Due to solid gains in both interest surplus and fee income, net earnings (before special reserve allocations) rose by a healthy 31%, from DM 31.6 million to DM 41.4 million. An appropriate amount was retained to further strengthen the balance sheet structure.

BHF-BANK's international market position was further strengthened in 1983. International services tailor-made to the individual customer's requirements were intensified, especially in the area of short-term trade financing and commercial transactions. Overseas highest priority has been given to expansion in the Pacific Basin. A branch was opened in Tokyo and another branch is planned for Singapore.

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German Investments in U.S. Real Estate

by Dr. Thomas R. Kabisch
Lehndorff Vermoegensverwaltung AG
(Lehndorff Property Management, Hamburg)

For more than twenty years, investments in US-real estate by German investors have been very popular. There is hardly another foreign real estate market that has attracted German capital to such a degree as in most recent times, the US-american. To date, many billions of German marks have been put to work in the United States, although there are no reliable statistics with the precise figures.

Planning a larger private portfolio of assets includes, nowadays, international diversification, bearing in mind that rates of return, tax aspects, currency rates and liquidity of an investment may differ favorably from country to country. It is necessary for the investor to channel his funds into states with highly sophisticated economic systems and inner stability (politics, economics, social change etc.). The interest of German investors in the United States is geared towards development projects, forests and farmland, as well as office buildings, shopping centers, apartments and houses, and extends to industrials and hotels.

The overall climate is very attractive, the legal and political framework stable and reliable. The dollar is the leading currency of the world and will remain so.

The expectations of the German investor cover the following aspects:

- appreciation in value
- high rates of return
- tax shelter
- shelter from inflation
- liquidity
- safety of the invested capital
- economic and political stability
- continuous reporting
- extensive service by the managing partners

Many aspects are in favor of putting up money for US-real estate. The overall climate is very attractive, the legal and political framework stable and reliable. The dollar is the leading currency of the world and will remain so.

Population and the economy will expand, with the consequence that prime real estate will remain a scarce and sought after economic factor.

The market depends upon supply and demand. Acquisitions, management and sales of income producing properties are subject to entrepreneurial aspects (cash-flow, rates of return etc.). Compared with Germany, rates of return tend to be considerably higher. The main reason for higher returns is that the price per sq. ft. rentable area is considerably lower on the average than in Germany.

On the right side is the "National Bank of Florida"-building, a Lehndorff property.

The following example compares two investments in a realistic manner. One is the purchase of bonds which bear a higher nominal rate of return than real estate. The other is an income producing property. However, the after-tax situation is in favor of the real estate investment, if no other factors play a dominant role (higher degree of liquidity, personal preferences of the investor etc.).

AFTER-TAX RATES OF RETURN

Assumptions

Investment sum US$100,000.–. German investor is in tax bracket of 58% (income and church taxes) and is liable for property taxes. No other income in USA.

Pre-tax rate of return: real estate property 8% p.a., bonds 12% p.a.

The real estate investment does not consider increase in value nor in cash-flow. Both investments are 100% equity financed.

The main reason for higher returns is that the price per sq. ft. rentable area is considerably lower on the average than in Germany.

	Building rental income in USA	**Bonds** interest income in USA
income	$8,000 (=8%)	$12,000 (=12%)
taxes minus German income and church taxes 1)	0	$6,960
minus German property taxes 2)	0	$ 500
minus US income tax 3)	$ 286	0
net rate of return after taxes	$7,714	$4,540
in percent of the investment	7.7% 4)	4.5%

1) Due to tax bracket of 58% there is no effect on income tax payable in Germany.
2) property tax 0.5%
3) The author is ready to deliver a detailed US-income tax calculation.
4) In order to equal the after tax rate of return, an investment in Germany real estate would require 18.3% pre-tax rate of return.

The market

Two aspects are of utmost importance to a German investor, and should be kept in mind. The first is the cyclicality of the industry, whereby a cycle lasts generally 6-8 years. At the end of a cycle, the market is overbuilt, lasting 2-3 years until the existing oversupply in space (with all the negative factors to the industry as e.g. rent-free periods, tenant improvements, low rent level) has vanished. Profitable deals materialize and construction picks up considerably. The forthcoming boom lasts 2-4 years and ends in the well-known situation of oversupply. It is important to note that in all phases of the cycle there is plenty of opportunity for sound and profitable investments. The second aspect is that the market is volatile and dynamic. It requires and produces the truly entrepreneurial type of developer, syndicator and manager of real estate.

Volatile and cyclical markets lead to the necessity of a deep understanding of the requirements of constantly changing conditions, lots of inside information, experience and professional advice.

Volatile and cyclical markets lead to the necessity of a deep understanding of the requirements of constantly changing conditions, lots of inside information, experience and professional advice.

Today, investors should buy office buildings that are reasonably priced and rented, well-leased on a medium term basis, with tenants of good covenants. Shopping centers require pretty high prices, but have extremely good upside-potential. Very popular investments are warehouses, industrial properties and R & D space. Return on investment in this category of the market can be considerably higher than in prime office and first-class retail space. Long-term leases with escalation clauses are quite common on this kind of property.

The core of sound real-estate investments is financing, because it is a very capital intensive industry. Two very basic changes have shown up. The first aspect is that sources of financing have altered profoundly. Traditionally, debt financing of 60-85% has been common. Since interest rates have climbed to levels of 14-16%, while rates of return in real estate stayed in the range of 8-11%, a negative leverage effect makes debt financing less interesting.

A new group of investors emerged, among them insurance companies, pension funds and syndications. Their sources of capital are very strong. Substantial amounts are raised by syndications, not only because of the attractive returns, but also for tax shelter purposes.

The second change is the cost of projects that have increased dramatically. Today, a good down-town location office-building costs $250/sq. ft. A 100,000 sq.ft. project requires an amount of $25,000,000 in equity, and that square footage is at the low margin of an efficient building. The individual private investor can't pursue his investment plan by himself, either because the sums involved are too high or it is not feasible because a diversified portfolio of properties is wanted. The solution for the investor is a syndicated form, the joint venture, the consortium.

The core of sound real-estate investments is financing, because it is a very capital intensive industry.

It brings most benefits to German investors to structure their investments in the form of a limited partnership under US-American or German law.

CROSSROADS MALL, OKLAHOMA CITY, a Lehndorff regional shopping center acquisition on a 55 acre site with approx. 1.33 million sq. ft. of building area located at the northeast intersection of I-35 and I-20 in the southeast quadrant of Oklahoma City.

The limited partnership format can be utilized as it provides the tax advantages normally associated with individual ownership, while maintaining the limited liability normally associated with share ownership. Limited partnerships can be structured to provide investment opportunities starting at $20,000.–, respectively DM 50,000.–. Rates of return start at 7-8% and show considerable upside potential, if the right properties are in the portfolio.

1333 NEW HAMPSHIRE is a 12-story office building located in the prestigious "Golden Triangle" office area of downtown Washington. The building has a gross building area of approximately 453,000 square feet and is situated on 33,762 square feet of land.

WELLS FARGO BUILDING, LOS ANGELES, a 48-story office tower acquisition situated on 1.7 acres of land in downtown Los Angeles, encompassing 1,243,00 sq. ft. of gross building area.

For small and large German investors it has turned out that acting independently might be costly and inefficient. Their investment goals can be achieved best by relying on established international management companies. They know the market, purchase and sell, and render professional service and counsel.

Maximization of profit is, and has to be, the first principle of any investment consideration. Operating cash flow, reasonable tax treatment, appreciation, diversification and overall safety of the investment must be analyzed with a keen eye on profit. In addition, the investment or real estate managers who operate internationally have to fulfil one important criterium: they have to be in a position to understand the needs of German investors and "translate" them into sound investments in the United States. ■

DEUTSCHE ZUSAMMENFASSUNG

Kabisch befasst sich besonders mit den deutschen Investitionsmoeglichkeiten in US-Grundbesitz. Investitionen in amerikanischen Grundbesitz seien bei deutschen Investoren seit mehr als zwanzig Jahren populaer, schreibt Kabisch. Kein anderer auslaendischer Grundbesitzmarkt habe bisher mehr Kapital angezogen als die USA.

Bei Immobilieninvestitionen in den USA ist nach Darstellung von Kabisch die Finanzierungsseite das Herzstueck, weil es sich hierbei um eine ausserordentlich kapitalintensive Branche handelt. Ein Buerogebaeude in guter Innenstadtlage koste heute beispielsweise 250 Dollar pro square foot. Ein 100.000 square foot grosses Gebaeude erfordere also immerhin den betraechtlichen Eigenkapitalaufwand von rund 25 Millionen Dollar, wobei nach Ansicht von Kabisch diese Groessenordnung eher an der unteren Grenze der wirtschaftlichen Effizienz eines Gebaeudes liegt.

Angesichts der in den USA immer noch hohen Hypothekenzinsen zwischen 15% und 16% bei Objektrenditen von 8% bis 11% sei die frueher uebliche hohe Fremdfinanzierung von Immobilieninvestitionen (60% bis 85%) heute weniger interessant. Dafuer sei eine neue finanzstarke Gruppe von Investoren auf den Plan getreten, unter diesen Versicherungsgesellschaften, Pensionsfonds und syndizierende Grundbesitzgesellschaften. Nach Darstellung von Kabisch werden durch Syndizierung betraechtliche Summen aufgebracht, nicht nur wegen der attraktiven Renditen, sondern auch aus steuerlichen Gruenden.

Die syndizierte Form—Joint Venture oder Konsortium—sei die Loesung fuer Investoren, die bei der Groessenordung ihre amerikanische Immobilienplaene nicht alleine realisieren koennten. Fuer deutsche Investoren, denen nicht betraechtliche Finanzierungsmittel zur Verfuegung stehen, sei es im allgemeinen am lohnendsten, ihre Anlagen in Form von Kommanditgesellschaften deutschen oder amerikanischen Rechts zu strukturieren. Die Kommanditgesellschaft verbindet die Steuerguenstigkeit von individuellem Eigentum mit der beschraenkten Haftung, der moeglicherweise Anteilsanlage zugrunde liege. Kommanditgesellschaften koennten so strukturiert sein, dass sie Anlagemoeglichkeiten ab 20.000 Dollar bzw. 50.000-60.000 DM boeten. Die Rendite beginne bei 7-8% mit betraechtlichem Steigerungspotential, wenn die richtigen Objekte im Portefeuille gehalten wuerden.

News for German companies with U.S. operations

Coopers & Lybrand has a special program to help German businesses thrive in America

Running a business in a foreign country is a difficult task. The problems that can threaten success are numerous. Coopers & Lybrand, with international public accounting and management consulting firms in 98 countries, can help you avoid these problems.

Special attention is required to assure the success of your U.S. operations. Coopers & Lybrand has a special program designed to provide you with high quality, innovative services, whether you're an entrepreneur or a public company; whether you're starting up a new business or making an acquisition.

Our professionals, who travel to Germany regularly, meet with parent company management to coordinate our services, discuss plans or resolve problems. We provide service in the areas of:

- Accounting and auditing
- Taxation
- Management consulting
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22nd International Sports Equipment Fair
21 - 24 February

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37th International Light Industries and Handicrafts Fair
The Fair for Small and Medium-Sized Enterprises
9 - 17 March

51st MWM MODE WOCHE MÜNCHEN*
International Fashion Fair
24 - 27 March

INTERBRAU
World Fair for Beverage Technology
3-10 May

COSMETICS*
6th International Trade Fair for Cosmetics, Health and Beauty Care with Accessories
31 May - 2 June

LASER OPTO ELEKTRONIK
7th International Congress and International Trade Fair
1 - 5 July

ISPO – Autumn*
23rd International Sports Equipment Fair
12 - 15 September

IGAFA*
13th International Trade Fair of Hotel and Catering Trades
21 - 25 September

52nd MWM MODE WOCHE MÜNCHEN*
International Fashion Fair
6 - 9 October

CERAMITEC
3rd International Trade Fair Machinery, Equipment, Plant and Raw Materials for the Ceramic Industry
15 - 19 October

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Computer and Communication
9th International Trade Fair and International User Congress
28 Oct. - 1 Nov.

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6th International Trade Fair for Electronics Production
12 - 16 November

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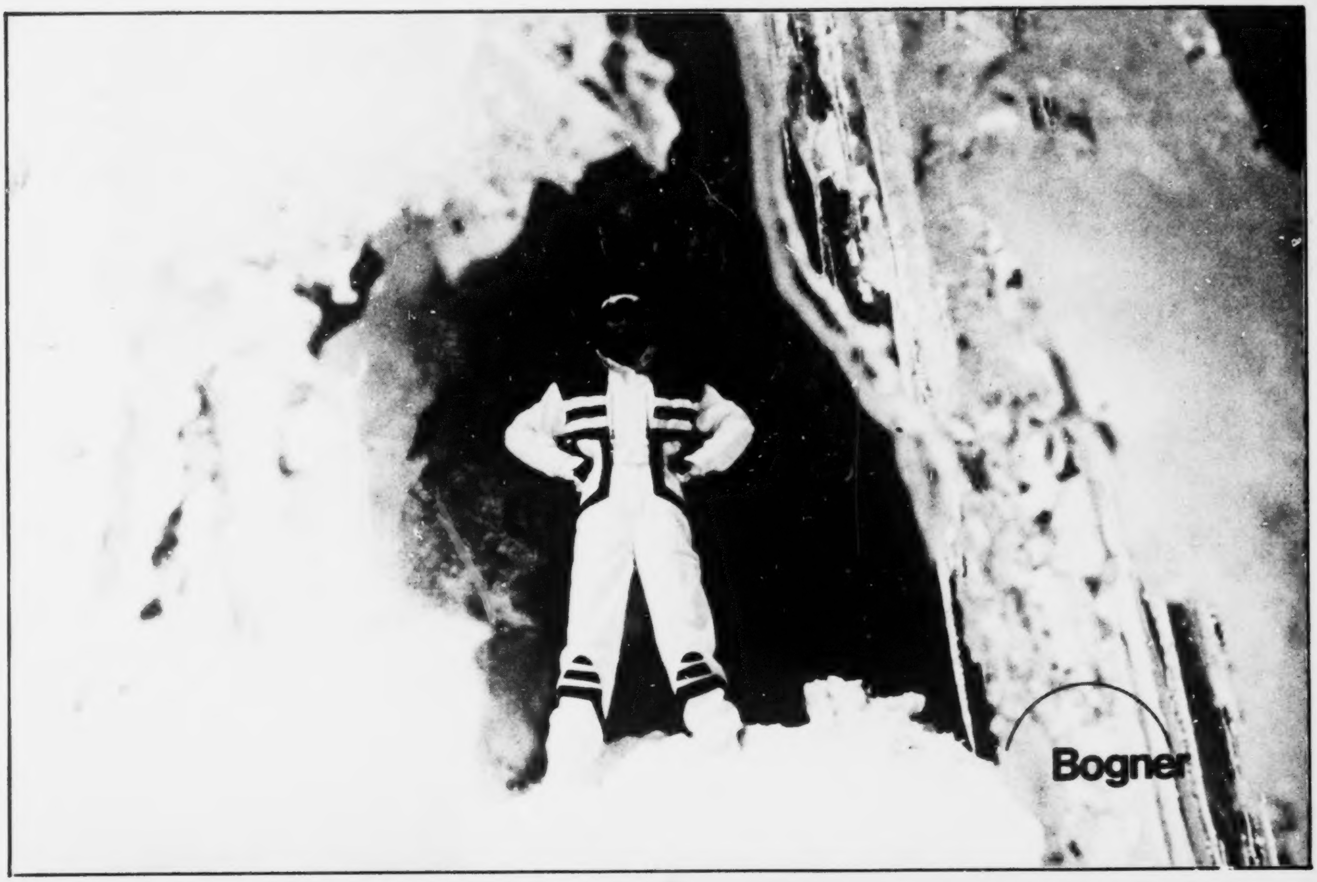

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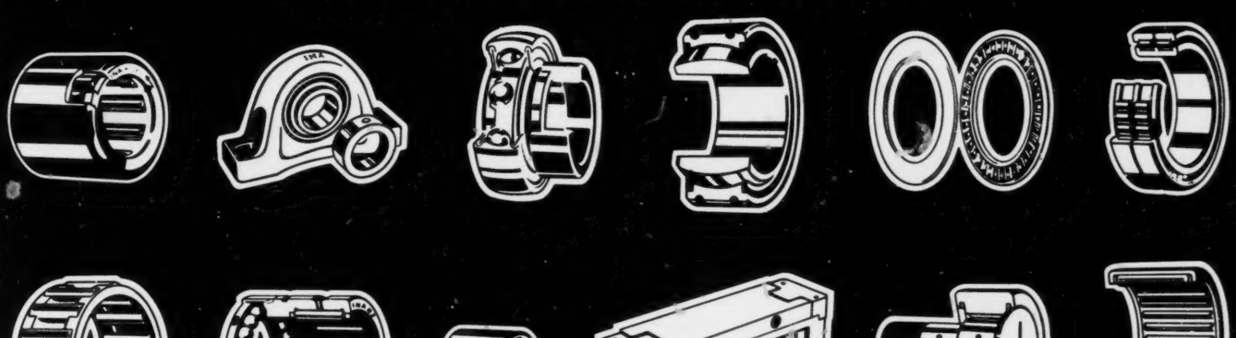

Company Profiles

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PROFILES

ABD Securities Corporation

Founded in 1968, ABD SECURITIES CORPORATION is an American investment banking firm with corporate headquarters in New York, and regional offices in Boston, Chicago and Los Angeles. It was one of the first foreign-owned investment firms established in the United States. Two major European banks—Dresdner Bank AG and Bayerische Hypotheken-und Wechsel-Bank AG share the common stock of ABD.

ABD employs about 100 professionals and staff employees in all areas of the investment banking business.

ABD serves the financial needs of European and other international corporate, institutional and individual investors who wish to purchase American securities, obtain American capital financing or operate in the United States and also serves American investors with similar objectives in foreign markets.

Its extensive range of coordinated financial services include institutional services and trading; investment information and research; portfolio management for individuals and institutions; underwriting and international corporate finance.

ABD's primary objective is to service the unique requirements of each client . . . no matter how specialized those needs may be. Its various divisions consistently coordinate their efforts toward a single goal: superior long-term investment results.

The Corporate Finance Division can create investment opportunities for multi-national companies or those who intend to become international. It offers a complete spectrum of investment banking services, and has completed numerous transactions in three primary corporate finance areas: establishing a subsidiary of a joint venture; formulating mergers, acquisitions and tender offers; and raising long-term capital.

It can provide valuable assistance to foreign or American companies interested in establishing or expanding international operations. ABD can help create a business structure or a joint venture suited to the market; determine the most logical location for a new plant; obtain financing, and negotiate the lease or purchase of real estate.

ABD's Portfolio Management Department offers investment counseling and fund management services for both institutional and individual investors including discretionary management, advisory management, and all depository functions including safekeeping of securities, collection and payment of income, and other special services as required by individual and institutional clients. Financial reporting may be adapted to meet varying specific legal requirements. All client accounts are included in a regular monthly review and reporting system.

ABD owns memberships on major United States stock exchanges and combined with its long-standing European relationships and other foreign market contacts, possesses numerous outlets for large block transactions—and can assure institutional and individual investors fast and efficient execution of their orders.

ABD is an important underwriter for public offerings made by major corporations in the United States and in foreign markets, and also serves as Broker/Dealer on numerous equity markets in the Western World; and provides trading, execution and clearance functions for institutional and private clients—on a worldwide basis.

allmilmö

ALLMILMÖ: among the leading brands of kitchens it is a newcomer, the Milewski Möbelwerk Zeil KG, in Zeil am Main, Germany, the home of the allmilmö kitchens, that has signposted the way in kitchen trends and has become one of the recognized market leaders.

With genuine innovations allmilmö has set new standards in the development of kitchens. This can be very clearly seen especially with today's kitchen conception and this is how a new concept came into being—allmilmö kitchen culture. It encompasses everything that is worth mentioning in and around the kitchen, everything that is noteworthy in design and everything that is beautiful. It doesn't matter whether the prospective customer is going for modern, country-style or period furniture. More important is that the customer forgets the mediocre when choosing his kitchen, because allmilmö offers optimal solutions in design, quality, function and interior decoration with its range of kitchen furniture. With the new successful innovations such as the 3 D design, Roundline and the unique Zeilostar programme with the exclusive folding doors, allmilmö has set, for example, remarkable trends in modern and post-modern interior design and architecture.

The decisive criterion for allmilmö is harmony in the conception of the kitchen. This is why one talks of absolute allmilmö design harmony because this furniture factory doesn't leave the design of the dining corner, wall unit, tiles or functional ceramics to chance but also creates the unusual in these important areas through typical allmilmö exclusive design.

Allmilmö offers one of the most comprehensive and discerning collection of kitchens on the international market and in all the very latest finishes—lacquer, genuine wood, laminate and wood laminate. And always in optimal quality.

In its kitchen concept allmilmö is always endeavoring to create not only space but room for living. An allmilmö kitchen is a real touch of the quality of life. It is perfect, functional and, above all, beautiful. Many international quality and safety awards prove that an allmilmö kitchen meets the highest standards.

Allmilmö is kitchen culture—a recognized trendsetter on the international kitchen market.

AMERICAN HOECHST CORPORATION, headquartered in Somerville, N.J., achieved sales of $1,625 billion in 1983. The diversified chemicals, plastics and pharmaceuticals producer also gained a record $35.5 million net earnings in 1983.

Hoechst-Roussel Pharmaceuticals Inc., a subsidiary, markets Lasix® (furosemide), a diuretic, one of the ten most prescribed drugs in the country; Claforan® one of the newest antibiotics; and Streptase® (streptokinase) which has been called a major breakthrough in treating heart attack victims. In addition, Hoechst-Roussel has approximately 25 other new drugs in various stages of investigation.

Hoechst Fibers Industries, producer of Trevira® polyester fibers, is one of the largest producers in the country.

The Petrochemical Division is a major producer of styrene monomer and high density polyethylene to the plastics industry.

The Plastics Division is one of the few suppliers of six different plastics in the country, including polyester, high density polyethylene, ultrahigh molecular weight high density polyethylene and PTFE (used to coat metals to prevent sticking).

The Film business units market rigid polyvinyl chloride film and sheet, polyester film, polypropylene sheet, polarized and film laminates.

The Industrial Chemicals business units supply aromatic chemicals as intermediates for agricultural, pharmaceutical, graphic, dye, pigment, and cosmetic industries; aliphatic chemicals for use in various industries including food, pharmaceuticals and plastics. The units also provide specialized resins for advanced coating technologies.

The Colorants & Auxiliaries business units supply dyes for textile applications; organic pigments for the automotive, plastics, paint and printing ink industries; textile and specialty chemicals for many applications including metalworking, cosmetics, detergent, oil drilling, fiber and paper industries.

ENCO® Printing Products provide presensitized offset printing plates and prepress color proofing systems.

AZ® Photoresist products are widely used by the electronics industry.

The Agricultural Division supplies products for crop protection, including Hoelon 3EC herbicide, and Compleasal® fertilizer.

The Animal Health Division provides pharmaceuticals for animal health including Panacur® for horses, and Flavomycin® (bambermycins), the only antibiotic designed for exclusive use in farm animals to promote growth.

The Behring Diagnostics Division markets diagnostic reagents and research biochemicals.

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THE ARTHUR ANDERSEN WORLDWIDE ORGANIZATION is one of the largest international financial services organizations, providing a full range of professional services in accounting and auditing matters, tax compliance and planning, and management information consulting, through 176 offices, including five in principal cities in Germany.

Since its founding in 1913, Arthur Andersen's guiding principle has been the assurance that all partners have a similar interest in servicing the firm's clients everywhere in the world. In keeping with this tradition, in 1978, the firm created a Societe Cooperative, domi-

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ciled in Geneva, Switzerland, to coordinate the worldwide services of Arthur Andersen & Co. This Societe Cooperative, which is controlled by all partners in the national practice entities throughout the world, assures consistently high quality client services in terms of professional practices and standards.

Accounting and Auditing—Arthur Andersen has always taken a business approach to its audit assignments and accounting services. All professional personnel are first trained to develop an understanding of the client's business and operating objectives. Recommendations regarding management systems are developed within this framework. Using this business approach, the firm renders specialized assistance in the accounting and financial aspects of seeking and evaluating potential acquisitions, locating plants and other facilities, and other contractual relationships.

Tax Services—Arthur Andersen's tax practice is supported by the world's largest nongovernmental body of full time tax professionals. Tax personnel in each office are totally familiar with local tax matters as well as important concepts of international tax planning and the intricacies of international tax treaties. Through sharing of experience, communications networks and worldwide research facilities, the firm offers fully integrated tax advice on such matters as organization structure, cross-border trading, transnational acquisitions, mergers and other undertakings. Similarly, the tax practice is well positioned to assist expatriates in their individual tax planning and compliance.

Management Information Consulting—For more than 35 years Arthur Andersen has helped clients meet their business information needs. The Management Information Consulting Practice has grown into the largest international consulting organization of its kind, with over 6,000 professionals in more than 20 countries. Consulting professionals design and install information systems and conduct analytical studies to provide the information executives need to effectively plan, evaluate and control their financial, marketing, information processing and other operations.

Atlantic Capital Corporation

(Now: DEUTSCHE BANK CAPITAL)

DEUTSCHE BANK CAPITAL CORPORATION, originally established in 1970, is a U.S. investment banking firm, wholly owned by Deutsche Bank AG. Deutsche Bank Capital employs about 100 professionals and staff employees.

The corporate finance activities of Deutsche Bank Capital include: the management of debt and equity public security offerings in the U.S. and international markets; the private placement of debt securities with U.S. and non-U.S. institutional investors; advising European companies in making acquisitions of U.S. companies; specialized corporate financings, such as tax-exempt Industrial Revenue Bonds and Pollution Control Bonds to finance plant and equipment in the U.S.; lease, leveraged lease, and currency hedge financing and financial advisory services, especially in connection with corporate acquisitions in the United States.

In the last five years Deutsche Bank Capital has managed or co-managed well over 300 different transactions including U.S. private placements, public offerings, Industrial Revenue Bond offerings, Pollution Control financings, lease financing and Euro-bond financings. In addition, the firm served as a financial advisor to numerous European companies which made acquisitions of U.S. public and privately owned corporations.

The underwriting activities of Deutsche Bank Capital consist of participations in most domestic and international syndicates, formed for the distribution of securities. In the past two years, Deutsche Bank Capital participated in over 850 domestic and foreign underwritings with commitments in excess of 1 billion dollars. These commitments were placed with financial institutions around the world.

The Stock Trading Department makes a market, trades as principal, and has an important agency order execution capability in American securities. Since December 1982, Deutsche Bank Capital has been a member of the New York Stock Exchange, where the firm executes the majority of its orders. The firm is also a member of most regional stock exchanges.

The Bond Trading Department makes active markets in U.S. domestic debt securities with special emphasis on "Yankee Bonds" and "Eurobonds," dealing with a broad range of institutional investors, who are served by a special bond sales group.

The firm's Money Management Services cater to private and institutional clients, including U.S. Pension Funds, desiring to have the U.S. Dollar portion of their assets managed and supervised on a discretionary basis.

The International Department markets non-U.S. dollar instruments, especially those denominated in Deutsche Marks, to institutional clients who seek international portfolio diversification.

BHF-BANK

BERLINER HANDELS- UND FRANKFURTER BANK

While the story of BHF-BANK dates back to the middle of the last century, its present status results from a merger between Berliner Handels-Gesellschaft and Frankfurter Bank in 1970. As a limited company the Bank is owned by approximately 25,000 shareholders and is directed by its personally liable managing partners. It is a merchant and commercial bank and issuing house, is involved in portfolio management and securities business, and has been active in international finance for more than a hundred years. The Bank, with total assets of more than 23 billion Deutschmarks, thus combines the advantages of a company that has access to the capital market with all the flexibility of a private bank.

The Bank concentrates its creative skills on wholesale banking activities, principally for larger companies. Through the years its proven ability to tailor its facilities to meet the most stringent requirements of its clients and its commitment to efficiency and good service have contributed substantially to the successful development of many companies of all sizes—German and international companies as well as subsidiaries to multinational corporations operating in Germany.

Headquartered in Frankfurt, Germany's financial center, BHF-BANK serves a broad and diversified clientele: industrial companies (including nine out of ten top German companies), multinational corporations, government agencies, public entities, international organizations, and financial investors, as well as private customers.

Through its foreign branches in New York, Grand Cayman and Tokyo, its subsidiaries in Luxembourg, Jersey, Zurich and New York, and its representative offices in the major financial centers, BHF-BANK is well positioned to provide its clients with individually packaged financing wherever the need arises.

Domestic and international mergers and acquisitions are carried out by the expert staff of FRANKFURT CONSULT Gesellschaft für Beteiligungsvermittlung und Fusionsberatung mbH.

Less than ten years ago BMW was regarded as a well kept secret in the United States. The Bavarian marque was recognized and re-

KMG

KNOWLEDGE WHERE IT IS NEEDED

KMG Main Hurdman in the United States, **Deutsche Treuhand-Gesellschaft** in Germany, **Fides Revision** in Switzerland and **Alpen-Treuhand GMBH** in Austria, major members of the KMG international organization, work together to provide services in:

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spected within a knowledgeable but small group of enthusiasts, but generally unknown to the casual motorist.

When BMW AG established BMW of North America as its sales subsidiary for the states in 1975, the initial task for the young company was clear: capture the attention of the larger group of consumers who the company was confident would appreciate the way BMW blended German tradition and technical innovation into an active, comfortable and safe driving experience.

The sales record of BMW in the United States over the past eight years shows that the goal was accomplished in dramatic fashion. Vehicle sales have increased almost four fold, from 15,007 in 1974 to 59,242 in 1983. Retail deliveries for this year are projected to surpass 65,000.

While this sales level may not be statistically significant in the multi-million unit U.S. automobile market, BMW's product philosophy and growth rate have enabled it to capture what one automotive journalist characterized as a share of mind which is totally out of proportion with its share of market.

During a period of recession, BMW emerged as a leader in the most dynamic part of the American market, the luxury/performance segment. At one time, the terms luxury and performance were mutually exclusive in the American market. Luxury was defined by size and weight, while performance was the province of a handful of European models and the Detroit muscle cars.

But events of the 1970s worked to distill the concepts of luxury and performance into a single market group. The two major factors were the demand for greater fuel efficiency in all types of automobiles and the move in American society away from disposable fads and planned obsolescence to enduring standards of design and taste. These consumers look for products with high intrinsic value, and in the luxury/performance market, where the automobile is an expression of individual taste and judgement, the price value relationship is equated with making a wise investment.

BMW of North America's marketing strategy since 1975 has focused on elements which are most important to consumers in this market. "The Ultimate Driving Machine" was selected as the way to summarize BMW's engineering philosophy. All BMW models are positioned as cars that deliver intelligent performance and workmanship in engineering excellence, rather than superficial opulence.

BMW has systematically expanded the capacity of its dealer organization in the country over the past eight years by placing emphasis on development rather than sheer growth. Average sales per dealer have increased from 60 in 1974 to 143 last year, and a projected 164 for 1984. By committing more cars to each dealership, BMW can work with each dealer on an investment program to create the personnel, work space and inventory capacities necessary to ensure customer service.

BMW of North America maintains its headquarters in Montvale, New Jersey, a corporate campus community twenty-five miles northwest of mid-town Manhattan. Dealer services are administered through six regional offices, in Atlanta, Chicago, Dallas, Los Angeles, San Francisco and New Jersey.

Parts inventories are maintained in distribution centers in New Jersey, Texas and California. Technicians are trained in four locations around the country.

BMW's commitment to the American market also includes a purchasing program. Original equipment obtained in the United States includes forged wheels, windshields, catalysts, leather, air conditioners and condensers. Annual purchases now total over $30 million.

In addition to the automobile business, BMW of North America is the importer and distributor for BMW motorcycles and marine engines.

BMW of North America enters the mid-eighties confident of solidifying its position as a leader in the U.S. luxury/performance market and continuing its role as the leading export market for BMW AG.

Gunter Kramer is the chairman and president of BMW of North America. The senior vice presidents are J. Gordon Bingham, responsible for automotive operations, and Horst Bodenbinder, responsible for finance and administration.

Bache Securities

One of the major events in Wall Street history took place in June of 1981, when THE PRUDENTIAL INSURANCE COMPANY OF AMERICA acquired one of the world's oldest and largest brokerage firms, Bache Halsey Stuart Shields Incorporated with over 100 years of investment experience.

Since 1879, when BACHE was founded, the firm has exhibited a forward-looking, innovative spirit which made it a leader in a number of investment areas. It was one of the first firms to make available to clients mutual funds, commodity futures, spot metals trading, listed options and life insurance, to name but a few. It was also one of the first to establish a formal training program for its Account Executives, to install a private newswire service and to computerize its operations. All of these developments resulted in more comprehensive, more efficient, and more professional service for our clients.

The largest insurance company in the world, The Prudential Insurance Company of America, with assets in excess of 72 billion dollars, brought massive new resources and capabilities to Bache thus marking the beginning of a new era in the investment industry. In late 1982, the name Prudential-Bache Securities was introduced in the United States to reflect the merger of these two distinguished firms.

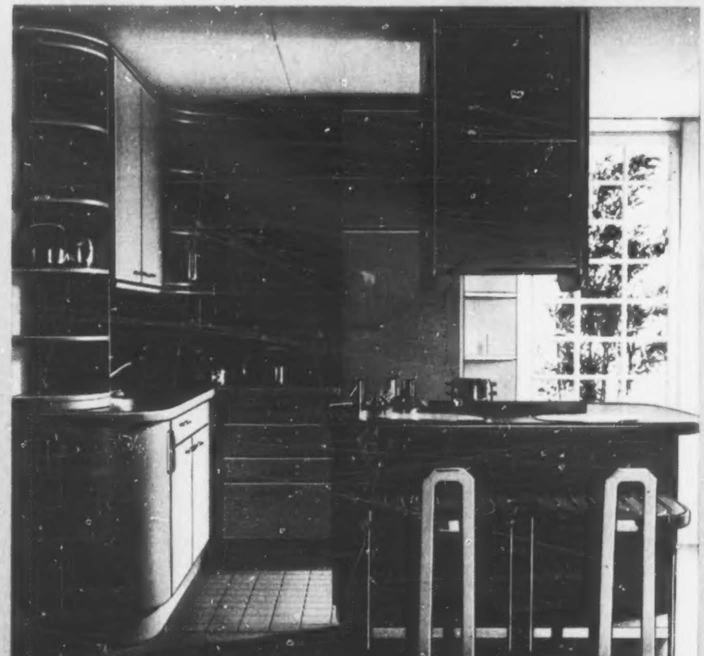
Directly or through its subsidiaries (locally named "Bache Securities"), Prudential-Bache has over 300 offices throughout the world. The firm employs more than 5,000 Account Executives and over 1,000 investment professionals actively engaged in providing a wide array of products, including stocks and bonds, commodities, options, mutual funds, annuities, investment banking services and many others. In all, Prudential-Bache offers nearly 100 products to individuals, institutions, corporations and governments.

Since 1896, the firm has been continuously represented internationally. Outside of the continental United States, Prudential-Bache subsidiaries currently have more than 44 offices in 19 countries including Puerto Rico and the U.S. Virgin Islands. These international offices are staffed by over 600 professionally trained and fully-licensed Account Executives serving the investment needs of Prudential-Bache's international clients.

Baden-Württemberg

The state of BADEN-WUERTTEMBERG is located in the southwestern corner of the Federal Republic of Germany. It is the third largest state, with an area of 35,750 square kilometers and 9.2 million inhabitants. The geographical location represents a particular advantage for both manufacturers and consumers: the major share of all Western European population centers and industrial regions is located within a radius of only 700 kilometers from Stuttgart, the state's capital. Besides the Federal Republic of Germany, a

The success of an international kitchen conception



Fineline pewter grey

allmilmö is the name in kitchens with the greatest success worldwide. With the slogan "allmilmö kitchen culture", allmilmö offers a collection of kitchens that optimally fulfils every desire for a discerning solution to kitchen problems.

Many significant quality and design awards underscore the functional aesthetics of exclusive allmilmö design and styling. This is proof of the uniqueness of the ideal behind absolute allmilmö design harmony because allmilmö offers simply everything that is worth mentioning in and around the kitchen in the way of beautiful styling – the allmilmö fitted kitchen, the Zeiloset furniture like the wall units, dining corners and "studio a" ceramics.

Anyone looking for a discerning kitchen concept should go for the exciting allmilmö kitchen culture.

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KITCHEN CULTURE

allmilmö Milewski Möbelwerk Zeil KG, D-8729 Zeil a. M.
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large part of France, the Benelux-countries, Switzerland, Austria and Northern Italy are within this radius. Thus, Baden-Wuerttemberg is located in the heart of Europe, which makes it a center for markets and suppliers, technologies and labor, purchasing power and investment capital.

Its favorable location, the high qualifications of its people and its well-balanced economic structure have made Baden-Wuerttemberg the economically most powerful state of the Federal Republic of Germany and thus probably also in Europe.

But Baden-Wuerttemberg is not only the economically most powerful state of the Federal Republic of Germany; it is also among the states with the most promising growth perspectives. Future-oriented sectors such as the electrical and electronics industries, automobile production, aviation and space flight, communications and telecommunications, nuclear technology and specialized tool manufacturing are well-represented and are developing their own dynamics. A number of innovative and technology-oriented suppliers have grouped around large-scale enterprises, such as Daimler Benz, Bosch, IBM, SEL, Dornier, ANT, Voith, Liebherr, to name only a few of them. But the real strength of the economy of Baden-Wuerttemberg lies in its proximity to the markets, its flexible approach to the customers' needs, and the outstanding quality and design of its products.

In the period from 1970-1983 the number of industrial enterprises decreased from 10,759 to 9,705 and the number of people employed fell from 1.6 million to 1.4 million. Within the same time, the annual turnover increased from 89 billion DM to 224 billion DM, while the export rate increased from 19% to 29%. Besides the state's production diversity, the special weight of the technology-oriented investment goods industry within the production sector is characteristic for Baden-Wuerttemberg's economic structure. Out of the 1.4 million people employed in the industrial sector almost 900,000 work in the investment goods sector, predominantly in machine production, electronics and automobile production. These three branches alone account for 49% of the labor force, 46% of the turnover and 65% of Baden-Wuerttemberg's industry.

In accordance with its liberal political attitude Baden-Wuerttemberg is interested in diversified economic relations: in the transfer of capital, technology and commodities as well as in joint ventures and the establishment of enterprises. Baden-Wuerttemberg's principal advantages are:

- central location in Europe,
- important position in the European market, one of the markets with the strongest purchasing power in the world,
- particular concentration of institutions for research and development,
- highly developed and yet regionally and sectorally balanced economic structure,
- efficient transportation network which is connected with the important international transportation systems,
- diversified and efficient energy supply,
- educational system well-supported in theory and practice-oriented.

The Ministry of Economics is prepared to support all interested parties by word and by deed in obtaining necessary information and making the necessary contacts.

BfG Bank für Gemeinwirtschaft

Established in 1958 with headquarters in Frankfurt, BfG operates as a commercial bank, offering its customers a complete range of 'universal' banking services. With consolidated assets of DM 58.7 billion at the end of 1983 the BfG group ranks among the largest private German banks. It has a staff of 8,000 and maintains a network of 255 offices

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NALAC is a German American firm and a member of the growing group of Allianz of America companies. Headquartered in Munich, the Allianz group is one of the largest families of insurance firms in the world. Through NALAC, and in conjunction with Allianz, German American businesses can benefit from knowledge, understanding and solid financial strength.

For more information, contact:
Michael M. Zyball
International Markets Director
North American Life and Casualty Company
1750 Hennepin Avenue
Minneapolis, Minnesota 55403
1-612-347-6509

throughout the Federal Republic of Germany and West Berlin.

In recent years, BfG has also expanded its international banking activities, supported by its subsidiary BfG:Luxembourg, branches in Hong Kong, London, New York and Cayman Islands as well as associated banks in Amsterdam and Basel. A representative office is also maintained in Saô Paulo. BfG is the only German bank that was engaged in the foundation of a bank in Israel: it holds 49.9 percent of the shares of the Israel Continental Bank at Tel Aviv, which has existed for ten years by now.

BfG's shareholders are German trade unions which hold directly or indirectly about 90 percent of its capital through Beteiligungsgesellschaft fuer Gemeinwirtschaft, a holding company of the trade union owned enterprises.

BAVARIA HOTEL VOCATIONAL SCHOOL

As of January 1st, 1981, the BAVARIA HOTEL VOCATIONAL SCHOOL has been approved by the Bavarian Ministry for Teaching and Culture establishing the "Bavaria" as the only government-recognized hotel vocational school in all of Germany. Educational instruction of high responsibility and solidity, combined with modern teaching plans and a qualified teaching team under the leadership of the director, Mr. Konrad Ries and the deputy director, Mr. W. Prochaska guarantee the best possible education. Modern teaching plans provide for up to date basic training in the customer-service industry professions of cook, restaurant specialist, hotel specialist and assistant in the customer-service industry.

Half of the training period, which begins either in September or in March, is spent on practical training. The main points of this training include working with foodstuffs plus related kitchen duties, practice in the pastry cooks' section, the butcher's table service with bar training and the buffet, training at the reception desk and in the hotel office, plus housekeeping including cleaning the rooms and doing the laundry. A wide range of optional subjects is offered to the students, such as typewriting, shorthand, Italian and Spanish. Supervised hours of study, extra practice sessions plus tutorials supplement the normal effort of the school towards each individual student and guarantee the best possible success.

In combination with the school, we have a school-hotel where all the duties of hotel personnel are learned. The students have excellent opportunities for their leisure time as the school is situated near beautiful lakes and high mountains and not far from such famous cities as Munich, Passau and Salzburg.

The end of each respective term participants are expected to pass official examination.

The Half-Year Course of Instruction in Gastronomy—The Customer-service industry needs properly trained recruits who fill the requirements, and the Bavaria Hotel Vocational School in Altötting in Upper Bavaria provides the best possible opportunity for this training.

Through a half-year course of study cooks, waiters, hotel tradesmen and restaurant assistants are prepared to take over responsible tasks in such areas as cuisine, table service, banqueting, food and beverage, housekeeping and hotel management. Special importance is placed on further education on the language level, for example in the kitchen or the restaurant. The theory of each practical subject and the economic and legal practice through actual cases in the hotel and gastronomic industry are also emphasized.

Especially in this half-year course special emphasis is laid on rounding off and polishing the technical know-how of techniques in the kitchen and in table service as well as developing an ability in commercial matters.

Detailed information is available from the Bavaria Hotel Vocational School, Instruction and Training Center for Gastronomy in Altötting in Upper Bavaria, Germany, Telephone: (08671/70010).

Bayer AG

With more than 400 affiliates and more than 100 manufacturing plants on five continents, BAYER AG, with headquarters in Leverkusen, Germany, is one of the largest chemical and pharmaceutical concerns in the world. Since 1863, when the three-man operation of Friedr. Bayer et Comp. was incorporated in Germany, the company has established a presence in almost all branches of industry as well as in the agricultural and health-care sectors throughout the world.

Bayer's presence in the United States began in 1865 with the production of dyestuffs. Today the company's activities are represented by Mobay Chemical Corp., Miles Laboratories, Inc., Agfa-Gevaert, Inc., Compugraphic Corp., Haarmann & Reimer Corp., and Helena Chemical Co., who together in 1983 accounted for sales totaling $3.5 billion.

Building on its dyestuff and pharmaceutical origins, Bayer has opened new vistas to entire industries by developing polyurethane chemistry, engineering thermoplastic based on polycarbonate, synthetic rubber and synthetic fibers.

In the agricultural sector, Bayer pioneered the development of systemic and other phosphorous insecticides and, more recently, has been successful in developing herbicides and fungicides.

Bayer scientists have distinguished themselves with their work in the areas of heart and circulatory diseases, hypertension, infectious diseases, tropical diseases, metabolic diseases and cancer. Prof. Gerhard Domagk, a Bayer scientist, won a Nobel Prize for his discovery of sulfonamides.

Bayer's 175,000 employees, a sales program of about 10,000 products and a wealth of experience that is reflected in almost 132,000 patents and 26,000 trademarks, enabled Bayer in 1983 to achieve worldwide sales of DM 37.3 billion.

HYPO BANK

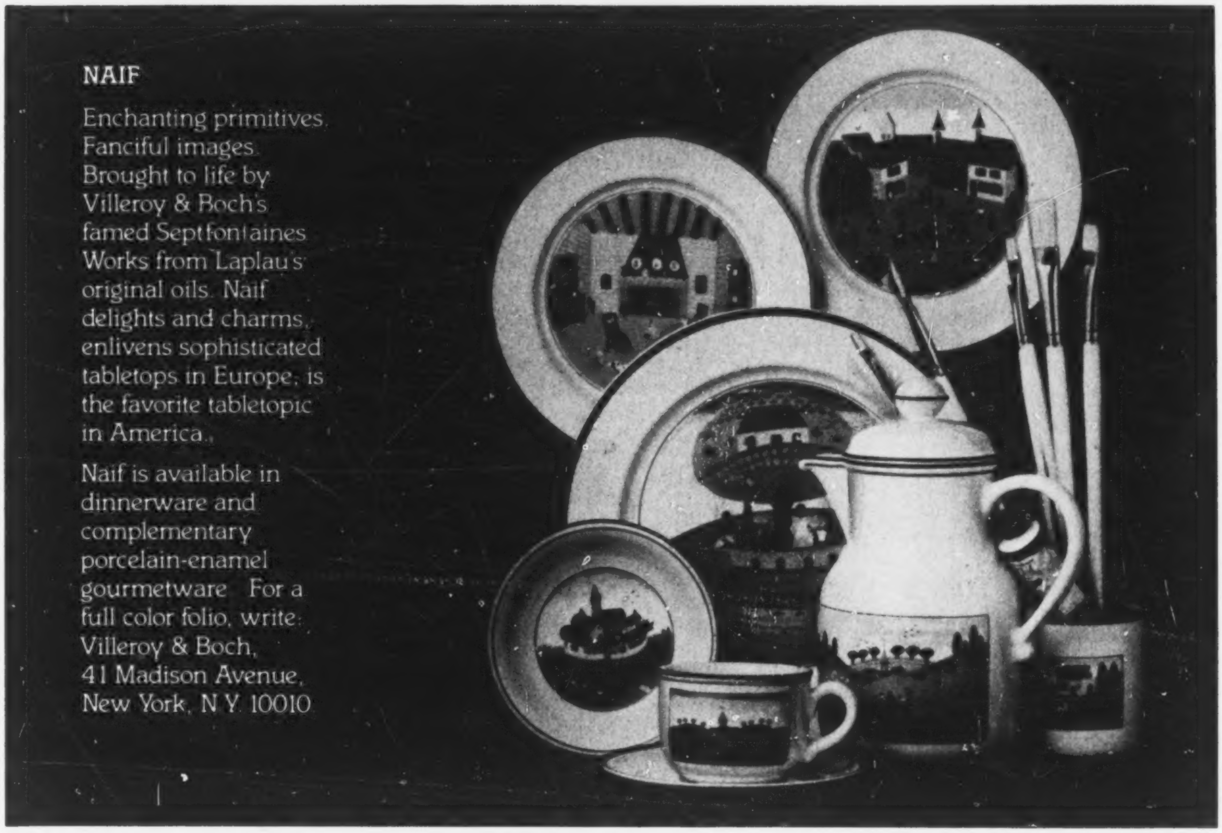
BAYERISCHE HYPOTHEKEN- UND WECHSEL-BANK
AKTIENGESELLSCHAFT

BAYERISCHE HYPOTHEKEN- UND WECHSEL-BANK AG was established in 1835 in Munich by royal decree of King Ludwig I of Bavaria. HYPO-BANK is Germany's oldest publicly-quoted bank and one of the largest with consolidated assets of more than DM 97 billion.

HYPO-BANK is engaged in both commercial and mortgage banking, operates the largest branch network in southern Germany, and is also active nationwide in key centers such as Frankfurt, Hamburg, Hannover, Duesseldorf, Stuttgart and Berlin.

Through its wholesale full-service branches in New York, Cayman Islands and London, its wholly-owned subsidiary in Luxembourg, representative offices in Brazil, Hong Kong, Italy, Mexico, South Africa, Spain and the United Arab Emirates, affiliates and its partnership in ABECOR, HYPO-BANK offers services around the globe. The Bank is a prime address for correspondent banking. And via its affiliation with ABD Securities, New York, its customers have direct access to the U.S. securities market.

For more information and a copy of our Annual Report please contact the Interna-



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BAYERISCHE VEREINSBANK
AKTIENGESELLSCHAFT

BAYERISCHE VEREINSBANK AKTIENGESELLSCHAFT, incorporated in Munich as a commercial bank in 1869 and merged with Bayerische Staatsbank (founded 1780) today ranks fourth among the largest private-sector banks in Germany. Together with its mortgage subsidiaries, Bayerische Vereinsbank is the largest private-sector, long-term banking group in Germany. As of June 30, 1984, the Bank's balance sheet total stood at DM 64 billion, consolidated total assets at over DM 112 billion.

As one of the few banks specializing in both the commercial and mortgage fields, BV offers particularly diversified services. Headquartered in Munich, BV's domestic presence is weighted towards Southern Germany, in particular Bavaria, but the bank is also present directly in all business centers of North Germany. So BV has branches in the German banking capital of Frankfurt as well as Duesseldorf, Stuttgart, Berlin and Hamburg. Bayerische Vereinsbank also holds interests in several well-known private banks in West Germany.

International business is conducted by about 50 domestic branches as well as out of 20 locations strategically placed around the world. Bayerische Vereinsbank also strengthened its market position in international financing and securities business, both at home and abroad.

North America was again a major focus of Bayerische Vereinsbank's international activities in 1983. The bank's network in North America is the largest of all German banks, with offices in New York, Chicago, Los Angeles, Atlanta and Cleveland, plus an IBF in Atlanta as well as a Eurobase in the Cayman Islands.

The Bank's wholly-owned subsidiary BAYERISCHE VEREINSBANK INTERNATIONAL, S.A., Luxembourg, is active in the Euromarket with a business volume of some DM 6.0 billion and a substantially strengthened earnings potential.

With over 400 branches and a staff of more than 11,000 employees, Bayerische Vereinsbank offers comprehensive domestic and international services tailored to the individual needs of its clients. The Bank is one of Germany's largest joint-stock credit institutions, and has about 67,000 shareholders. BV shares are traded on all German stock exchanges.

BELZER-DOWIDAT
PRAZISIONSWERKZEUGE

The BELZER-DOWIDAT GmbH has been in existence for 100 years. The company has its headquarters in the Bergisches Land, a region known as a traditional center of German tool manufacture.

The Belwer-Dowidat-Werke, based in Wuppertal is wholly owned by the Saarberg-Werke AG. In the past, this company has achieved numerous special developments and thus earned its reputation as a "pacemaker in tools." Worldwide, this tool manufacturer offers more than 18,000 articles for use in all significant fields. Especially in the development of special tools for highly technical uses—such as in electronics, aviation, automobile manufacture, telecommunications and atomic energy technology—the name Belzer has become a byword for advanced tool quality.

The company today still feels primarily bound by the concept of quality. New tool forms are being developed according to the laws of functionalism, ergonomics, and aesthetics in close cooperation with suppliers, experts and practitioners from industry, trade and crafts.

Belzer-Dowidat has available all modern processing technologies. It has its own laboratories and testing facilities.

The products designed, constructed and manufactured by the firm's 850 employees are marketed and maintained on the markets of Europe, Africa, Australia and Asia by five marketing subsidiaries and import partners. The company owns a manufacturing facility in Brazil. The Ferramentas Belzer do Brasil in Sao Paulo employs 450 persons and fills the growing demand for tools in Brazil and the other South American countries.

Economic Development
BERLIN

The BERLIN ECONOMIC DEVELOPMENT CORPORATION (Wirtschaftsfoerderung Berlin GmbH) was created by the Berlin Government for the purpose of promoting West Berlin as a viable, safe and profitable industrial location. The organization is staffed by experts recruited from the private sector who speak the language and understand the problems of big business and the entrepreneur. Mr. Elmar Pieroth, the Senator (i.e. Minister) of Economic Affairs of the State of Berlin (West) is BEDC's Chairman, and Mr. Robert Layton, a former Ford executive, its President.

In the United States, the BEDC is represented by a main office in New York City (767 Third Avenue, New York, N.Y. 10017-2079) and by regional offices in Atlanta, Boston, Dallas and San Francisco.

Since its establishment in 1978, BEDC has been responsible for attracting over 230 companies to West Berlin, creating approximately 6000 new jobs. The related investment in plant and equipment amounted to close to DM 1.2 billion. In addition, 2200 jobs were saved through assistance rendered to companies in difficulty, and 4300 jobs resulted from expansion of existing companies with the aid of BEDC.

Altogether, there are 24 affiliates or subsidiaries of American companies in West Berlin, many of whom have expanded their operations in recent years. Among them are such well known names as IBM, ITT, United Technologies (with Otis and Inmont), Warner Lambert, Kaiser Aluminum, Gillette, R.J. Reynolds, General Motors and Bally. Ford Motor Company joined this group in 1982 when it launched a large plastics plant which supplies 90% of Ford's requirements of plastic components in Europe.

What attracted these and other companies to West Berlin is a first-rate infrastructure—industrial, technological, R & D and quality of life—and an array of financial incentives second to none in Europe. In addition to investment grants, low-interest loans and reduced taxes, Berlin offers a unique turnover bonus which can add up to 14.2% of sales to a company's pre-tax profit.

It is the function of the Berlin Economic Development Corporation to explain these incentives and other attractions to prospective industrial investors and to assist them in their plant location studies. BEDC's experts will assist in the development of financial models and will advise in questions of corporate organization, financing, taxation, real estate, labor, etc. These services are confidential and free of charge.

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Bogner

What is a "Bogner?" You can find the definition in The Oxford Dictionary of Synonyms as a general expression for ski pants. However, a true Bogner is not simply ordinary skiwear—it represents top quality materials, refined and functional fitting and excellent finish. Moreover, the Bogner flair is not restricted to skiwear.

Sports and fashion have been blended into a characteristic style that spans a unique group of collections from active sportswear to women's wear to men's wear to sunglasses and a wide choice of accessories. For many years now, Bogner also has included walking, tennis, cross-country skiing and golf fashions.

The traditional Bavarian blouses and dirndl dresses which once were produced to keep the operators occupied during the skiwear lull have become a women's wear collection. Today, this line appears four times a year, and has become a mainstay of Bogner's market. A men's wear collection features a wide range of sport slacks, jackets, coats, pullovers, suits and shirts.

Who is Bogner?

Willy Bogner GmbH & Co. KG of Munich is one of the world's leading sportswear manufacturers. In this context leading does not refer to just name and reputation or number of employees. The company leads in many areas, especially in corporate policy and culture, as well as in organization and modern production methods.

Approximately 1,300 employees work in several German factories, they are supported by some 50 contractors and a factory in Malta with 140 employees.

Bogner of America in Newport, Vermont employs 160 persons and manufactures ski and tennis wear for the American market.

Worldwide, Bogner sells to the leading specialty stores, about 1,000 in Europe and 400 in the United States.

CARL G. BRIMMEKAMP & COMPANY, INC. (CGBCO), was established in 1962 in San Francisco to give European industrial manufacturing and engineering companies easy access to the North American market. CGBCO is now headquartered in the New York Metropolitan area in Stamford, Connecticut.

With branch offices in the Chicago, Houston and San Francisco areas, this dynamic firm helps its European clients to transfer their technology and capital goods across the Atlantic for maximum profit.

CGBCO's principals are primarily highly specialized privately owned manufacturers of capital goods and engineering firms. At the same time CGBCO also assists some of Europe's industrial giants.

CGBCO's staff of engineers and marketing people come from industries which they now service:

- pulp and paper
- chemicals and pharmaceuticals
- fibers and plastics
- energy and alternative fuels
- mining and cement
- ferrous and non-ferrous metals
- machine tools
- bulk solids and materials handling

Working within their specialties, these professionals arrange for their client firms to:

- import/export
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- partially manufacture in North America
- manufacture under license
- contract manufacture in North America
- acquire total or partial equity in North American companies

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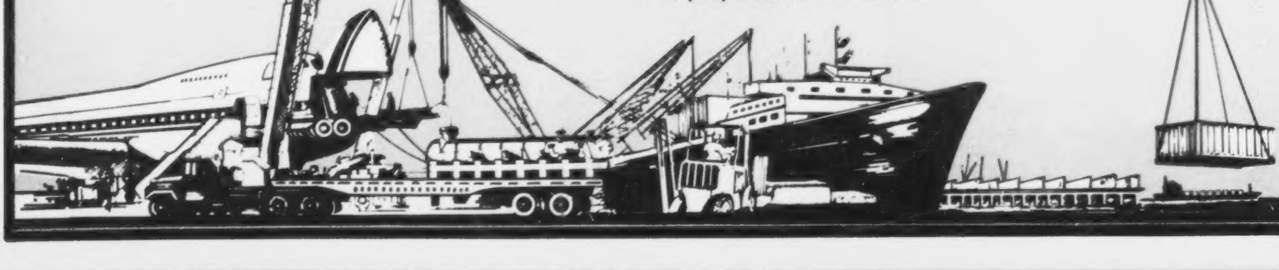

- establish a North American company

Particular emphasis is placed on an efficient after-sales-service.

CGBCO also assists in facilitating financing, either through private or government sources. Furthermore, CGBCO is prepared to enter into joint venture agreements whereby it makes its office infrastructure and its qualified personnel available to its principals.

BROUT & COMPANY

CERTIFIED PUBLIC ACCOUNTANTS

BROUT & COMPANY is a leading medium-sized accounting firm founded over sixty years ago. Several partners and staff members speak German, French and Spanish. We have in-depth experience in U.S. and international tax matters, are conversant with foreign accounting principles and financial statements formats.

We have substantial experience with small and medium sized European companies either starting up or acquiring operations in the U.S. We respond promptly to our clients needs. Our expertise permits us to contribute to the success of a client's operations.

All services are performed under the constant direction of senior engagement partners who can draw on the full resources of the firm.

We are attuned to the needs of regulatory authorities and financial institutions here as well as in Germany. We have substantial experience in mergers and acquisitions, transfer pricing and off-shore organization. Our management services department has extensive experience in small and large computer installations.

CITIBANK

A subsidiary of Citicorp

For over fifty years CITIBANK has served customers in Germany.

In 1928 a representative office was opened in Berlin. It was closed in 1941 because of the war.

In 1953 a representative office was opened in Frankfurt, which re-established business relations with German multinational corporations and German banks.

When the German government permitted foreign banks to establish branches in Germany, the bank's representative office became a branch in 1960 and opened its doors in the center of Frankfurt's banking district. It was convenient to maintain good business relations with US-companies from the Frankfurt headquarters; however, to serve German companies the bank had to adapt to regional conditions.

Between 1965 and 1970 branches were opened in Berlin, Dusseldorf, Hamburg, Munich and Stuttgart. After the approval of German bank authorities in 1976, the bank became an "Aktiengesellschaft" according to German law; all shares are held by the Citibank Overseas Investment Corporation (COIC), a subsidiary of Citibank, N.A. New York.

Citibank Aktiengesellschaft is the largest foreign-owned bank in Germany and is among the top fifty German banks. In 1983 Citibank's business volume amounted to DM 5.6 billion, whereas total assets were DM 3.8 billion. At the end of 1983 Citibank AG had 553 employees in Frankfurt and its branches.

Today, a full spectrum of banking services and products is offered. Citibank, especially distinguishes itself in FX-dealing, Securities Trading, International Trade Service, International Private Banking and "CitiBanking," our electronic banking service.

Citibank's traditional customers have been large, primarily multinational companies. However, since the end of 1983 Citibank seeks to provide financial services to middle market firms, as well. Because this new direction requires Citibank to be close to the market place, a new branch was opened in Nuremberg in April 1984, and more branch openings are planned.

BANK

COMMERZBANK

COMMERZBANK was founded in 1870 by Hamburg merchants and bankers and, not least through a series of acquisitions and mergers, soon became a leading force in German banking. Today it ranks third in size among German commercial banks and is engaged in all forms of commercial banking, as well as in underwriting, syndicate and investment banking. The emphasis in commercial banking is on short- and medium-term loans, but long-term lending is also being stepped up. Over the past two decades, retail banking has experienced rapid growth.

The Commerzbank group, whose staff numbers over 22,000, maintains a domestic branch network of 872 offices located throughout West Germany and West Berlin. It comprises about 20 domestic banking and financial associates, the most important of which are Berliner Commerzbank and Rheinische Hypothekenbank, a leading German mortgage bank.

Foreign activities have long had a significant part in the overall business of the bank, whose international departments are all located in Frankfurt. Major holdings abroad include 100% interests both in Commerzbank (South East Asia) Ltd., Singapore, and in Commerzbank International S.A., Luxembourg, a 70% stake in Europartners Bank (Nederland) N.V. in Amsterdam and Rotterdam, and a 40% interest in the New York investment bank EuroPartners Securities Corporation, as well as holdings in more than 30 other financial institutions in about 20 countries. In addition, Commerzbank operates twelve foreign branches—in Antwerp, Atlanta (agency) Barcelona, Brussels, Chicago, Hong Kong, London, Madrid, New York, Osaka (agency), Paris, and Tokyo, and 19 representative offices abroad. In all, the Bank today offers its services at 70 different locations in more than 30 countries.

Commerzbank has always maintained especially close relations with the Americas. In 1971, Commerzbank transformed its New York representative office, which was opened in 1967, into a branch—thus becoming the first German bank to operate a full-service branch in the U.S. In 1974, the Bank's U.S. operations were expanded with the establishment of a second branch in Chicago, and in 1979 its presence was further extended through the opening of an agency in Atlanta, Ga.

The Bank's capital and reserves as of June 30, 1984 totaled DM 2.643 billion. Its balance sheet total amounted to more than DM 69 billion, while its consolidated total assets reached DM 119 billion.

CONSORTIA, INC.

CONSORTIA, INC. is a unique international organization, unlike any other entity. Consortia consists of a consortium group of business and personal entities whose prime objective is to support and facilitate entrepreneurial, as well as established firms, thereby fulfilling innovative professional and personal goals. The entities within Consortia encompass fifteen economic sectors and are coordinated and monitored through the Consortia Executive Core Group.

Participants in the Consortia groups have typically been active within the organization on a strong, continuous basis. After stringent analysis and excellent performance on numerous projects, participants may be chosen to handle a specialized or generalized sector in their consortium. Since projects are handled on a performance basis, all personnel are constantly in an evaluation process with periodic reevaluation required. This ensures entrepreneurs and outside resources of the highest quality service in all of Consortia's support programs.

Consortia offers entrepreneurs and all clients a comprehensive support capacity that encompasses all the essential services required to bring new concepts to fruition. A few of the many functions that Consortia creates and coordinates are:

—Expert development of appropriate and carefully-phased funding programs.

—Effective management groups to develop and manage the business activities of emerging and established companies.

—Comprehensive representation of concepts and opportunities to all markets—local, national and international.

—Innovative new organizations to more effectively support the new ideas of a rapidly changing business climate.

Coopers & Lybrand

Growing your business in a new country is not a simple task. An adaptation process is required so that your new American venture can succeed in its new environment. COOPERS & LYBRAND understands that this "cultural transplant" needs a great deal of tending and has designed a special program for both German investors and German companies with U.S. operations.

Our network of 90 U.S. offices is staffed with partners experienced in both start-up and well established businesses. All our people are business people who approach work with one overriding goal: to help your company succeed. We have the financial and management experience to make your German business a success in America.

Our special program for German companies is led by James W. Zug, John T. Rudden and Gunther Strothe, who are fluent in German and travel to Germany regularly. They have already helped many large and small German companies establish new operations and make acquisitions in the U.S.

To help you become part of your new environment quickly, Coopers & Lybrand can provide you with introductions to banks, attorneys and members of the local business community.

Because of Coopers & Lybrand's expertise in different industry groups, we can also advise you on the economics and problems facing specific industries in the U.S. We will keep you abreast of changing rules and regulations from Washington and guide you through the complex maze of actuarial, benefits and compensation regulations.

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DG BANK

Deutsche Genossenschaftsbank

DG BANK with headquarters in Frankfurt am Main, an internationally operating wholesale bank established by special legislation, provides comprehensive commercial and investment banking services and acts as central liquidity manager for the cooperative banking system in the Federal Republic of Germany.

In 1983, DG Bank and its consolidated subsidiaries, the DG Bank Group, increased its load portfolio by 15.7 percent to DM 62.3 billion (equivalent to U.S. $22.9 billion), its total assets by 11.6 percent to DM 77.7 billion (U.S. $28.5 billion), and its business volume—total assets and contingent items—by 12.1 percent to DM 83.4 billion (U.S. $30.6 billion). Net interest earnings grew by 54 percent to DM 677 million (U.S. $249 million). After substantial provisions for loan risks, especially country risks, consolidated net income for 1983, as for the preceding year, was DM 100 million (U.S. $36.7 million). Of this amount, 70 percent was allocated to reserves. The Bank's unchanged dividend of 5 percent, which is tax-free for the recipients, amounts to a pre-tax return on their investment of 13.9 percent. Total shareholders' equity now amounts to DM 1,411 million (U.S. $518 million).

The Bank's American branches in New York City and Los Angeles, where International Banking Facilities are operated as well, continued to expand their lending business and were equally successful in attracting a substantial volume of non-bank deposits. In 1984, DG Bank and a number of other West European cooperative banks established the European Securities Corporation in New York City.

The German cooperative banking system, based on the principle of voluntary association and today ultimately owned by 9.7 million shareholders, operates some 19,600 banking offices throughout the Federal Republic of Germany—more than 40 percent of all banking offices in the country. In 1983, the system's consolidated assets increased by 7.1 percent to DM 443.2 billion, equivalent to U.S. $162.7 billion.

DANZAS

DANZAS GmbH, one of the big forwarding organizations in Germany is a wholly owned subsidiary of DANZAS AG, Basle and was founded in 1919. Today we have 75 offices in the Federal Republic of Germany, including West Berlin.

Special divisions for air- and seafreight and for project shipping worldwide, specialized departments for food transports as well as for Trade Shows in Germany and abroad guarantee a high measure of competency and experience. As one of the largest forwarders, we offer a full range of transportation.

We know the competing carriers and we are able to match special demands and their special requirements. Being independent, we are not obligated to any carrier.

DANZAS GmbH cooperates with the whole DANZAS network internationally in Europe and overseas. We are represented in all 5 continents with 500 DANZAS offices and more than 10,000 employees.

In addition, our commercial delegations in the U.S.A. (among others in New York, Atlanta, Charlotte, Greenville-Spartanburg, Los Angeles, Miami and Richmond) hold a tight contact with our customers.

The Alltransport Inc., part of the DANZAS Group and headquartered in New York, has branches in Baltimore, Chicago, Houston, Los Angeles, New Orleans, and Norfolk. Another subsidiary is the Seaway Forwarding Corp. in Cleveland and Toledo.

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We will continue to serve our customers efficiently in the future and to help them save money in the field of transportation, because this is our market.

Deutsche Bank
A century of universal banking

The DEUTSCHE BANK AG, headquartered in Frankfurt/West Germany, is the largest bank in the Federal Republic of Germany on the basis of assets, deposits, loans or capital. The Bank together with its consolidated subsidiaries is one of the world's leading banking enterprises with total assets as per December 31, 1983 of DM 210.2 billion, deposits of DM 193.0 billion and stockholders' equity of DM 6.78 billion.

The Bank is engaged in a full range of commercial banking activities such as providing credit of all types and maturities and accepting deposits. In addition, the Bank is, in Germany, active in underwriting, distributing and trading securities and holds equity investments in some of the leading industrial corporations in Germany. The Bank's consolidated subsidiaries are engaged in mortgage lending, investment management, property management, leasing and construction financing. Through Deutsche Bank Compagnie Financière Luxembourg, the Bank is one of the leading institutions involved in Euromarket lending and loan syndication.

Its network of international offices and affiliates has been consistently expanded and its cooperation with more than 4,000 correspondent banks throughout the world has been steadily intensified.

The New York branch of Deutsche Bank was established in 1978. The branch is involved in commercial wholesale banking with an emphasis on short and medium term lending, trade finance, documentary international business, foreign exchange and money market dealings. Offshore activities are channeled through the International Banking Facility (IBF) and Cayman Islands Branch. Representative Offices are maintained in Chicago and Los Angeles.

In 1982 the Bank established the wholly-owned subsidiary Deutsche Credit Corporation (Deerfield/Illinois) which emphasizes financing and leasing capital goods. Deutsche Bank is also engaged in U.S. investment banking through its wholly-owned subsidiary Atlantic Capital Corporation (see ACC). Additional activities in North America are shown by a wholly-owned subsidiary and a representative office in Toronto.

By late 1983, Deutsche Bank had 14 branches, 19 representative offices and 8 wholly-owned affiliates abroad. Group staff numbering nearly 47,300 at 1,407 branches work for 6.3 million customers all over the world: individuals, large and small corporate customers, banks, public authorities, states and supranational institutions.

DEUTZ®

DEUTZ CORPORATION is an American subsidiary of Kloeckner-Humboldt-Deutz AG(KHD) of Cologne, West Germany. Headquartered in Atlanta, Georgia, Deutz markets air-cooled diesel engines from 3.5 to over 500 hp for construction, industrial, forestry, mili-

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tary, mining, oil field, rail maintenance, concrete pumping, welding, agricultural equipment and for powering medium trucks.

The parent company, Kloeckner-Humboldt-Deutz AG, is one of the oldest and largest engine manufacturers in the world. It manufactures both air- and liquid-cooled diesel engines, turbines and jet engines. KHD also manufactures tractors and agricultural equipment and designs and manufactures machinery, as well as complete industrial plants for processing raw materials.

Top model lines for Deutz include the FL912-913 AirDiesel and the FL511. These two families provide power outputs from 20 to 160 hp. The FL912/913 AirDiesel has been a consistent best seller for Deutz, with precursor models in production since 1952. The FL511 line features a compact design that combines light weight with high output.

Deutz engines have been marketed in the United States since 1876, with Deutz marketing directly since 1951.

Today, the Deutz parts and service network includes over eighty distributor locations and more than 450 dealers across the continent. With sales and central parts facilities in Atlanta, Deutz is well situated to serve the needs of the North American market.

Deutz Corporation believes that it has achieved its position in the American market through the quality of its engines and by service and sales support that keep customers satisfied. Over 100 years of engine development and a third of a century servicing the North American market underline the Deutz commitment to quality and innovation.

DRESDNER BANK AG was established in Dresden in 1872 and is now headquartered in Frankfurt, West Germany. With a worldwide consolidated business volume of the Dresdner Bank Group of DM 164 billion, the company ranks among the largest banks in the world.

As a "universal bank," the Dresdner Bank offers the full range of banking services. Internationally, the bank specializes in investment advice and in the management of mutual funds and of pension funds. It also holds a leading position in placing bond issues floated by foreign issuers, and in introducing the shares of foreign corporations to German stock exchanges. The bank also plays a significant role in the foreign exchange and money businesses as well as in gold coin and in bullion trading.

As Dresdner Bank has been internationally orientated from the very beginning its foreign business makes up about a third of total business volume. Decades of experience, a network of branches and representative offices abroad, and co-operation with over 5,000 correspondent banks all over the world enable the bank to back the industry in their international business. As syndicate manager Dresdner Bank has organized the financing of numerous large-scale projects in several countries. Of significance is furthermore the Bank's leadership in financing the sales of the European Airbus A 300 and A 310.

Dresdner Bank was the first German bank to establish, in 1967, a subsidiary in Luxembourg, Dresdner Bank International, which successfully engages mainly in international finance, securities, money market, foreign exchange and precious metals business.

In recent years the Bank has strongly intensified its involvement in the United States and maintains fully operating Branches in New York, Chicago and Los Angeles and Representative Offices in Houston, Texas, and Miami, Florida. With its 75% participation in ABD Securities Corporation, New York, Dresdner Bank has also gained a good position in the American brokerage and investment business for U.S. as well as German customers.

Dresdner Bank meets the needs of its customers in dealing with the increasingly more specialized problems arising in international business by offering an individualized advisory service backed up by vast connections including offices in more than 50 countries on all continents.

We are happy to serve our customers at home and abroad.

EM INDUSTRIES, INC.

EM INDUSTRIES, INCORPORATED, a subsidiary of Merck AG of Zug, Switzerland, and the U.S. associate of E. Merck, Darmstadt, Germany, is a diversified manufacturer of specialty chemicals for many different applications. The Merck group resumed its activities in the U.S. in 1971 with the creation of EM Laboratories, Inc., which was later renamed EM Industries, Incorporated. EM Industries' business will reach a volume of $90 million in 1984 and is channeled through four operating divisions.

The EM Chemicals Division supplies a wide range of high quality specialty products to the pharmaceutical, food, electronics, optics and plastics and coating industries. During 1978 and 1979, the first phase of a new chemical complex was constructed in Savannah, Georgia, where pearlescent pigments for cosmetic and industrial applications are manufactured. In a later addition vacuum deposition materials for the optical and electronic industries are produced.

The Rona Pearl Division, which was acquired in 1975, is a major supplier of specialty chemicals to the cosmetics industries. Rona Pearl has pioneered in the development of the first synthetic nacreous pigments approved for cosmetic use. These pearlescent pigments add an iridescent glow to powders, eye shadows, blushers, lipsticks, liquid makeups, nail enamels, cream, shampoos and soaps.

The EM Science Division was formed in 1980 by merging the then acquired Harleco group with MCB Manufacturing Chemists, which was acquired in 1977. MCB is one of the oldest, most respected names in the field of laboratory chemicals. MCB had been able to extend its product offerings with the addition of fine laboratory products from E. Merck, Darmstadt, the largest worldwide supplier of high purity chemicals. MCB manufactures and sells close to 4,000 products for analytical and research purposes in industrial educational and governmental laboratories. EM Science has been for several years a well-established company in the clinical chemistry, hematology, cytology and histology markets. E. Merck, Darmstadt, concentrates a substantial part of its active research in clinical chemistry. During 1984, E. Merck has formed a new diagnostic entity in the United States—EM Diagnostic Systems, Inc. This company will be an independent corporation with participation by Dr. Richard Nadeau, well known in the diagnostics field. The Harleco group will become an integral part of EMDS. This new company has started introducing a new clinical analyzer of Eppendorf, a German manufacturer of clinical chemistry instruments and shortly hopes to broaden its approach to the clinical chemistry marketplace, which includes hospitals and private clinical laboratories as well as government health services.

Center Laboratories, which joined the EM group early in 1979, offers a line of quality controlled, highly effective extracts to the allergist. These biological products include extracts of pollens, molds, dusts, inhalants, epidermals, insects and food which are used to bring relief to allergy sensitive patients.

In addition to these commercial activities, EM Industries conducts clinical research for the Pharmaceutical Department of E. Merck, Darmstadt, and is testing new plant protection products developed by Celamerck of Ingelheim, Germany.

EIMELDINGEN

EIMELDINGEN Corporation, a wholly-owned subsidiary of Maschinenfabrik Eimeldingen in Eimeldingen, West Germany, was founded in 1979 in Indianapolis, Indiana. Eimeldingen is one of the world's largest manufacturers of ultra-precise rotary machine tool tables. . .dividing, graduating and coordinate tables. . . required for extremely accurate machining, measurement and inspection.

Eimeldingen's international reputation for extreme precision is acknowledged and utilized by industries manufacturing aerospace equipment, aircraft, helicopters, automobiles, generators and turbines.

This prestigious international company was founded in 1932 in Stuttgart as a designer and manufacturer of automatic transfer machines. In 1945, a new production facility built in Eimeldingen, West Germany, started manufacturing vises; various tilting and rotary movement workholding pieces—necessary for a retooling industrial nation—resulted from these original vises.

In the 50's when industry required precision measuring and inspection tables, Eimeldingen designed and manufactured rotary and rotary tilting tables to meet these requirements. In the early 1970's, Eimeldingen's rotary machine tool table was interfaced with other industrial operations, including numerical control capabilities. This served to open the OEM market for Eimeldingen precision rotary tables, which were being widely used for production purposes; since 1975, nearly 80% of all Eimeldingen products have been used in a production function, with sales to all Western countries.

Eimeldingen Ltd. was opened in 1977 as a sales and service facility to accommodate Great Britain and the British Isles. Eimeldingen/Indianapolis was established in 1979 to provide the international firm with yet another manufacturing facility. Eimeldingen provides exceptionally qualified design and electronics personnel to build custom rotary machine tool table orders to the most exacting specifications. In 1983, Eimeldingen introduced Flexible Manufacturing System (FMS) and FMS components for parts machining, loading and handling applications. Eimeldingen FMS components and systems provide an automated, continuous flow of parts to and from various production operations, such as machining centers and vertical turret lathes.

SIP machining centers—recognized worldwide as the leader in precision machining centers—in combination with technically qualified personnel make it possible for Eimeldingen/Indianapolis to provide the United States market with the same precision industrial manufacturing equipment as that built in Europe.

ElectroCom Automation Inc.

ELECTROCOM AUTOMATION INC., a subsidiary of HM International Inc. of Tulsa, Oklahoma, is a high-tech manufacturer of document processing and telecommunications products serving the U.S. Postal Service, the banking and financial markets, and public safety agencies. E.C.A. has a current backlog of nearly a quarter-billion dollars, predominantly in the manufacture and installation of high speed reading and sorting machines for the USPS. Located in Arlington, Texas, our facility has 245,000 sq. ft. housing engineering labs, software development facilities and manufacturing operations. Of 300 employees, over a third support our manufacturing operations while over 50 degreed engineers focus on the application of high technology to solve tough customer

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ElectroCom Automation's Telecommunications Systems specialize in land mobile radio systems for both voice and data applications. R.F. engineering design technology, using proprietary propagation prediction techniques, applied to systems problems, is our strength in the market. E.C.A. is not a manufacturer of radio products, but an integrator of vendor supplied R.F. equipment. We manufacture a proprietary line of mobile data terminals and base digital controllers to support data message transmission linking mobile radio units to a base computer. ElectroCom Automation Inc. is the designer and integrator of the world's largest combined voice simulcast and mobile data radio network, which was for the Los Angeles, California Police Department.

ElectroCom Automation has a proven capability to bring foreign technology into the vast U.S. markets. By adding manufacturing expertise and marketing acumen, ElectroCom Automation can open up these U.S. markets to your products at very low risk. Contact G. H. Bolen at (817) 461-3511 or Telex number 75-8324 (Domestic), 203900 (International), or write to us at P.O. Box 95080, Arlington, Texas, USA, 76005-9080, if you have products of interest.

EAB
European American Bank

EUROPEAN AMERICAN BANK, headquartered in New York City, is a U.S. bank chartered in New York State and is a member of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the New York Clearing House Association.

The bank has more than 90 branches in the New York/Long Island area of metropolitan New York and offices in Nassau, the Bahamas. Its customers include U.S. subsidiaries of companies based in the countries of its European shareholders, New York area consumers and medium-size businesses, major U.S. corporations, governments and correspondent banks.

EAB is the principal subsidiary of European American Bancorp. which at year-end 1983 had $8.7 billion in assets and is owned by six of Europe's largest banks, including Deutsche Bank AG. The other shareholder banks are: Amsterdam-Rotterdam Bank N.V., Netherlands; Creditanstalt-Bankverein, Austria; Midland Bank plc, United Kingdom; Societe General de Banque S.A., Belgium; Societe Generale, France.

FAG

FAG BEARINGS CORPORATION is an international organization whose trademark is a worldwide symbol of quality and dependability in the design and manufacture of bearings in all sizes and configurations. FAG is recognized as the signature of one of the world's oldest and largest manufacturers of precision ball and roller bearings. Since 1883 FAG has led the way in the development and

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refinement of bearing design and technology. Today, FAG employs over 31,000 people in branches and affiliate plants in the U.S.A., Canada, Brazil, Germany, Austria, Switzerland and Portugal. There are, in addition, FAG sales and service offices and distributors in more than 100 countries.

FAG headquarters in the U.S.A. are located in Stamford, Connecticut, where a full complement of administrative, marketing, engineering and distribution personnel service the American market. The chief U.S. production facility is in Joplin, Missouri. After undergoing extensive expansion, the Joplin plant has been producing an extended range of bearing types in sizes hitherto never produced in the U.S. FAG's capabilities in bearing design and manufacturing are second to none. From automobiles to steel furnaces, farm machinery to spacecraft, FAG is ready to provide bearings, housings, accessories and components, whatever and wherever the need.

First Boston

THE FIRST BOSTON CORPORATION, headquartered in New York City, is a full-service international investment bank uniquely positioned at the crossroads of global capital flows. As financial intermediary, we are in constant contact with both the suppliers and users of capital worldwide; moreover, we are consistently creative in our aproach to meeting their financial and strategic objectives. Our market making and trading activities cover the complete range of securities of corporations, financial institutions and governments and their agencies, 24 hours a day. We offer not only intelligent advice and innovative ideas for raising capital and solving complex financial problems worldwide, but we also provide unparalleled resources and facilities for executing transactions.

First Boston established a unique affiliation in 1978 with Credit Suisse First Boston ("CSFB"), a leading London-based merchant bank. Together, First Boston and CSFB offer comprehensive international investment banking and securities trading services.

First Boston and CSFB are consistent leaders in raising capital worldwide.

First Boston is preeminent in merger, acquisition, takeover defense and divestiture activity. In the past six years, we have assisted clients in transactions exceeding $69 billion in value, including more than 60 international transactions. This total includes both large and small transactions and discreet advisory assignments.

First Boston and CSFB have traded as much as $2 trillion in securities in a year, making us a leading trading force in the world capital markets.

First Boston's Project Finance Group—the first of its kind on Wall Street—has worked on more than 200 domestic and foreign project assignments. Over the past five years, the Group has raised more than $16 billion for projects in all relevant world capital markets.

In total, we leverage our international expertise and presence to the benefit of each client, whether domestic or foreign, by capitalizing on opportunities whenever and wherever they occur.

FIRST UNION

FIRST UNION NATIONAL BANK is a $6.4 billion dollar bank (as of 6/30/84) headquartered in Charlotte, North Carolina. We are a major force in the southeast region of the United States, finishing the second quarter of 1984 as the 37th largest bank in the United States in terms of total assets, and 40th in terms of deposits. For a number of years, First Union National Bank's International

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Division has had a foreign reverse investment and trade flow orientation. Through our Charlotte staff and our representatives in London, Düsseldorf, and Tokyo, First Union's International Division serves the trade financing needs of a growing number of importing and exporting customers. International companies wishing to expand into North Carolina and other southeastern states have found us to be responsive to their needs, not only for traditional and special financing services, but also for advice and counsel related to investments. During 1983, we upgraded our Düsseldorf representative office by increasing its staff in recognition of the importance of German-speaking Europe to the southeast United States.

We continue to emphasize quality operational services to our international customers. In 1983, we gave a high priority to automated enhancements as well as new product development. Our goal is to expand our operating capabilities and to be a leader in advanced customer-oriented international operations.

Frankfurt

West Germany, with a population of nearly 62 million people and the fourth largest GNP in the world, is one of the leading economies in Western Europe.

At the heart of West Germany's dynamic economy is FRANKFURT AM MAIN, the nation's financial, commercial and distribution center. There are 360 credit institutions in Frankfurt, and more foreign banks than in any other Continental European city—over 200, including 35 American banks.

Frankfurt is also the home of the Bundesbank, West Germany's central bank, as well as of the nation's biggest stock exchange.

It is a city with a highly sophisticated infrastructure providing all the facilities necessary for innovative decision-making: adequate space; comprehensive legal, tax and financial services; the full range of communications capabilities; a highly skilled workforce; vast market potential; the most modern transportation facilities; a business atmosphere that rewards resourcefulness.

Electronics, chemicals, and engineering are the main manufacturing industries. A healthy mixture of manufacturing and service industries combine with the main service sectors of trade, transportation, communications, banking, finance and insurance to comprise Frankfurt's highly diversified economy.

Frankfurt is the economic and distribution center of the Rhine-Main Region, which has a population of nearly 2.5 million and a workforce of 1.2 million. It is the second largest urban concentration in West Germany and one of the fastest growing areas of Western Europe.

Finally, Frankfurt is clearly the transportation hub of West Germany. Its central location puts it in the mainstream of the country's efficient air, rail, road, and waterway networks which, in turn, provide direct, fast access to all key domestic, West European and overseas markets.

Messe Frankfurt

FRANKFURT FAIRS AND EXHIBITIONS, with a worldwide impact on commerce and trade, evolved from an 800-year tradition of international trade markets. By following or even anticipating the largest trends of their times, they constantly remained modern in the best sense of the word. The present evidence is a DM 600 million construction program. On the 50.5 acres of fair grounds, this provides facilities designed for the trade show expectations of the 1990s. The best conditions will be available for trade events of all kinds and sizes, for flexible adjustments to the requirements of all industries. Most of all, the dominating criteria of today's schedule of events will be emphasized: internationality.

Besides the Frankfurt International Fair, world-renowned "opinion leader" for high quality consumer goods, Frankfurt hosts another bienniel event, the *Interstoff.* In April and October fashion designers and manufacturers acquaint themselves with the latest in clothing textiles. The annual *Heimtextil* fair draws more than 60,000 visitors, and features carpeting, curtains and other types of household textiles. The annual *International Fur Fair,* one of the leading trade events in the field, offers products from the fur finishing and processing industry as well as the season's latest designs.

The *Frankfurt Book Fair,* with more than 5000 participating publishing houses from over 90 countries, is the largest market for books, copyrights and translation rights.

In alternate two-year intervals, two exhibitions for the trade are staged in Frankfurt: the IAA *International Automobile Exhibition,* which attracts more than one million visitors; and the *automechanika,* which features equipment for automotive workshops and service stations as well as spare parts and accessories.

Other important fairs include: the ISH International Fair for household sanitary, heating and air conditioning technology; ACHEMA—chemical equipment and apparatus; IFFA, an international fair for meat processing equipment as well as spare parts and accessories, with a 44 percent participation of non-German exhibitors. New trade shows include Microcomputer '85 (January), Public design, the International Trade Show for Environmental Design (October 1985), Marketing Services and Promotion (automated production).

Whatever the direction of the economy graph, the Frankfurt Fairs continue to distinguish themselves for the results they achieve for buyer and seller alike. The ever growing participation from all parts of the globe is the best proof of this claim to quality and performance.

FREIGHTLINER®

FREIGHTLINER CORPORATION

FREIGHTLINER CORPORATION produces and markets heavy-duty (Class 8) Freightliner trucks and Mercedes-Benz medium-duty (Class 6/7) trucks. Headquartered in Portland, Oregon, Freightliner Corporation is a subsidiary of the West German company Daimler-Benz AG—the world's largest manufacturer of commercial vehicles and the maker of the world-renowned Mercedez-Benz automobile.

The company markets its Freightliner and Mercedes-Benz trucks through six regional sales offices, which are backed up by six parts distribution centers supplying parts to any place in the U.S.

Serving Canadian customers is Freightliner of Canada Ltd. The Canadian company, a subsidiary of Freightliner Corp., has a manufacturing plant in Burnaby, British Columbia. In addition, Freightliner of Canada has two parts distribution centers in Canada.

Freightliner Corporation's strong dealer network consists of almost 180 franchised Freightliner and 200 franchised Mercedes-

Benz truck dealers throughout the U.S. and Canada.

Freightliner's origin dates back to the late 1930s when Leland James saw the need for a specially designed truck to meet the demands of long-distance hauling. James had formed Consolidated Freightways in 1929 and needed a lighter, stronger and more economical truck to pull bigger loads. Although he began crafting the first Freightliner aluminum body panels in 1939, it wasn't until after World War II that James joined forces with four other truck builders to pioneer the design and manufacture of the first cab-over-engine tractor. Freightliner became the industry leader in truck innovation and design, creating the all-aluminum cab, the aluminum integral sleeper and the first 90-degree tilt cab. In addition, the company spurred the application of the diesel engine for over-the-road use. Freightliner built its first long-nosed conventional in 1974.

In 1981, Daimler-Benz AG bought Freightliner Corporation from Consolidated Freightways, and a year later merged its Mercedes-Benz Truck Company with Freightliner, placing Daimler-Benz' North American commercial vehicle manufacturing and marketing operations under one corporate umbrella.

Today, Freightliner is the fourth largest producer of heavy-duty trucks in America.

GARRETT

THE GARRETT CORPORATION, with some 20 major divisions, subsidiaries and associated elements worldwide, designs and manufactures systems, products and components for the aerospace, energy management and surface transportation fields.

Founded in 1936 by the late J.C. "Cliff" Garrett as a small supplier of aviation accessories, Garrett has evolved into a well-balanced industrial complex of more than 22,000 employees in plants and offices in nearly every country in the western world.

The Garrett Corporation is one of The Signal Companies, a multi-industry company with strong, strategic positions in the aerospace, electronic communications, energy service, transportation and construction industries.

Garrett equipment is used on commercial, military and business aircraft, in automotive applications and in industry. Most of its products involve the use of very high-speed rotating machinery, heat-transfer technology and electronic, hydraulic and pneumatic control technology.

As a leading supplier of propulsion engines for general and commuter aviation, Garrett produces two turbofan engines, the TFE731 and the ATF 3-6, along with the TPF331 turboprop engine. It is also manufacturing the F109-GA-100 turbofan engine for the U.S. Air Force T46A Next Generation Trainer (NGT).

Another major Garrett product line is that of environmental control and also cabin pressure control systems for aircraft. Environmental control systems, in which Garrett pioneered, are being and have been produced for more than 75 different types of U.S. and foreign military aircraft, and 35 different domestic and foreign civil airplanes.

Garrett also produces for aircraft use a variety of computers, area navigation and energy management systems, auxiliary power units, inflatable survival equipment and emergency locator beacons.

The company manufactures turbochargers for industrial, automotive and aircraft use; gas turbine engines of numerous sizes; pneumatic controls and systems; hydraulic motors and pumps; castings for turbomachinery, aircraft systems and related high technology components; industrial regenerators and recuperators; and thick and thin film hybrid microcircuits.

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GOLDMAN, SACHS & CO., one of the world's leading investment banking and brokerage firms, was founded in 1869 as a dealer in commercial paper. Over the succeeding decades, Goldman Sachs has entered into many investing and financing service areas on a broad scale. Today it is among the leaders in nearly every major activity in which it engages.

Continuing in the tradition of its founders, Goldman Sachs retains its long-standing position as the world's leading commercial paper dealer, with 1983 sales in excess of $360 billion. We are the leading dealer in international commercial paper, with 53 international issuers including Bayerische Hypotheken-und Wechsel-Bank AG, Hoechst Capital Corporation, Nixdorf Computer Corporation and Thyssen Holding Corporation. In addition, we were the first to offer foreign currency commercial paper—providing proceeds in such currencies as Sterling, Deutschemarks, Swiss Francs and Japanese Yen.

In the U.S. domestic markets, Goldman Sachs offers a number of investment banking services to international clients. These include medium- and long-term public offerings and private placements, tax-exempt financings, real estate financing and sales, lease and project financings, and merger and acquisition advisory. Our leadership position in the U.S. securities markets is based upon our strengths in investment banking, distribution capability and secondary market-making activities. Since 1980 we have been the lead manager of public financings in the U.S. domestic markets for Barclays Bank PLC and Barclays North American Corp., Caisse Nationale des Telecommunications, Republic of Finland, Ito-Yokado Co., Ltd., Midland American Capital Corporation, Nippon Telegraph & Telephone, Novo Industri A/S, Rodime plc, TCK Electronics Co., Ltd. and Tricentrol PLC.

Our expertise in sales and trading activities includes equity and fixed income market making, block trading, options trading, securities arbitrage, and commodities and financial futures; all supported by an outstanding investment research team.

On a worldwide basis, we provide assistance to our clients in Eurobond financing, medium- to long-term currency transactions, syndicated bank loans, project financing, and government and corporate advisory services. And we are one of the foremost factors in transnational mergers and acquisitions.

Goldman Sachs has a firm commitment to international banking among all of its over 3,500 employees based in 16 offices across the United States and overseas.

Hamburg Messe und Congress GmbH

FAIRS AND CONGRESS CITY HAMBURG: As a cultural, communications and economic metropolis, Hamburg has grown into a recognized center for international congresses and fairs. As such, the city is ideally equipped. Situated at the crossroads of multinational markets, West Germany's biggest port and industrial city can offer hotel accommodations of 17,000 beds, first-class connections to other cities and countries and a colorful choice of attractive leisure values.

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for 7,500 persons in 16 rooms, present a unique opportunity for combining exhibitions and conventions. About one dozen international specialized exhibitions annually attract more than 1.9 million visitors, and over 5,000 exhibitors from all parts of the world choose Hamburg as a venue for showing their products and services.

The German International Boat Show (staged each year in October), the specialized exhibition and congress "Ship, Machinery, Marine Technology International" (held every year in September) and the "InternorGa" International Trade Exhibition for the Hotel, Catering and Bakery Trades, belong to the leading exhibitions of their kind in Europe. Other important Hamburg Fair events are the annual tourism exhibition "Reisen"—the largest consumer show in Germany DU UND DEINE WELT (in August/September).

In 1985, with the International Harbour Exhibition "Portex '85" in conjunction with the 14th International Conference of the "International Association of Ports & Harbors" (IAPH) an outstanding event for the shipping world will take place in Hamburg.

"Portex '85," from May 7 to May 10, 1985, presents port equipment and port operation, port traffic and transport systems as well as port management, administration and port services.

The Portex seminar program especially will concentrate on the modernization of ports and harbours by electronic means and systems. This complies with the schedule of the IAPH-Conference, too.

"Portex," first presented in 1981, attracted some 200 exhibitors from 17 countries. 6000 experts from 38 countries conferred, consulted and pooled knowledge with one another, obtained information and discussed solutions to specific problems.

The growing need today for venues where fairs can be combined with congresses is fully catered to in Hamburg by the architecturally and technically superb Congress Center Hamburg, one of the most modern buildings of its kind in Europe.

Finally, the halls are so arranged that catering facilities can be provided anywhere in the building.

Henkel

During the past decade, HENKEL's activities grouped within its U.S. subsidiaries have demonstrated successful growth. 1983 sales exceeded $400 million, and business is geared toward continued development with emphasis on growth areas where Henkel has superior technology to meet specific customer needs.

Henkel of America, headquartered in New York, is the holding and management organization for Henkel's business in the United States. The principal operating organization is Henkel Corporation, Minneapolis, Minnesota, which is structured into four decentralized divisions and two central staff support groups: technology and administration. Each of the divisions contributes significant portions to sales and profits. The product lines are diversified and serve many customer groups in various countries.

The Functional Products division manufactures and sells food ingredients, water soluble polymers and natural Vitamin E. The Chemical Products division encompasses a broad line of specialty chemicals such as resins, adhesives, organic specialties for cosmetics, leather and textile auxiliaries and operations in Canada. To a large extent, products are based on natural, renewable raw materials such as fats and oils, wheat, soy beans and guar gums.

Amchem Products, Inc., Ambler, PA, which is another division of Henkel Corporation, makes inorganic specialties for metal treatment and rust prevention for automotive,

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container and metal fabrication industries.

The fourth division combines the Minerals Industry business and International Subsidiaries of Henkel Corporation in Brazil, Mexico, Venezuela, Italy, Ireland, Japan and South Africa. Mining chemicals are primarily sold to copper and uranium recovery companies worldwide.

In 1983, approximately 3,000 people worked within the Henkel of America group. Henkel has 13 production locations in the United States.

The parent company, Henkel KGaA, headquartered in Duesseldorf, had worldwide sales of DM 9+ billion in 1983. With approximately 100 affiliates throughout the world, foreign sales, including exports from Germany, accounted for 65 percent of total sales.

Helaba Frankfurt
Hessische Landesbank -Girozentrale

Headquartered in Frankfurt and an integral part of the city's domestic and international banking community, HESSISCHE LANDESBANK is among Germany's top 100 banks, with total assets at the end of 1983 of more than DM 63 billion.

As a large German universal bank concentrating on wholesale banking, Hessische Landesbank offers a comprehensive program of facilities geared to the needs of big corporations, governments and government entities, and financial institutions. These facilities include:

—International financing with special emphasis on medium- to long-term fixed-rate DM loans. The Bank's global lending commitments are currently spread over more than 50 countries.

—Foreign trade financing, including documentary credits, letters of credit, government guaranteed export loans, non-recourse export financing (á forfait), and international payments and collections. The Bank is a member of S.W.I.F.T.

—Foreign exchange dealing, not only for the Bank's customers and Hesse's Sparkassen, but also as market maker for its worldwide correspondents in spot, forward, and Eurocurrency deposits.

—Money market operations, serving central banks, other financial institutions and corporate clients.

—International capital market financings, including Euro-DM issues, publicly offered foreign currency issues, private placements, and foreign share placements.

—Investment advisory services and portfolio management. Hessische Landesbank is in permanent contact with banks and securities dealers in all major international security markets.

—Euromarket financing and services through its wholly-owned Luxembourg subsidiary, Hessische Landesbank International S.A., full-service branches in New York and London. These facilities abroad and an active global network of correspondent banks provide Helaba's clients with the full scope of international services.

Hessische Landesbank acts as banker to the State of Hesse and performs clearing and other centralized services for Hesse's 52 regional Sparkassen, both of which are its shareholders.

HM

HILLE & MÜLLER is one of the leading cold rolling mills in the world. The company employs more than 2200 people in 6 works in Germany and in the United States of America. Among the regular customers in many parts of the world are companies of different industrial branches, such as household industry, motorcar industry, electrical industry or construction industry.

Our range of products is, in the first instance, determined by cold rolled steel and by cold rolled steep strip electrolytically plated or clad with non-ferrous metals. The nonferrous metals we are using are nickel, chromium, brass, copper, tombac, zinc and aluminum.

The aim of the company is to produce quality of the highest demands. Hille & Müller and the associated companies are well known as producers for cold rolled steel strip and electrolytically plated cold rolled steep strip with bright glossy surfaces and closest tolerances. The application of our materials helps to save heavy expenditure on piece-part plating or purchase of solid non-ferrous metals. During the almost 100 years of its existence many new products have been developed by our company. The know-how collected during that time and the constant increasing of our production programme provide the answers to the problems and requirements of the metal working industries.

Within Hille & Müller innovation teams up with tradition. The company was founded in Großschönau/Sudentenland, where, in 1885 the first mill was established. Already in 1895 the founders of the company, in the previous Porschdorf works near Dresden, successfully performed surface finish of sheets. Another mill was founded 1905 in Düsseldorf-Reisholz, where today the headquarters of the group is located.

Another important date within company history is the year 1974, when Hille & Müller extended their field of operation over the Atlantic and took over Rafferty-Brown, Waterbury, Connecticut, USA. This proved to be an important step. Only one year later the Thomas Steel Strip Corporation, Warren, Ohio was acquired, which is a mill with a product and market structure similar to that of the main works.

The purchase of the Westfalia GmbH in Hilchenbach in 1976 was made in an effort for diversification and in order to open a door into metal working. The Trierer Walzwerk GmbH, Trier, which primarily is producing clad cold rolled steel strip with non-ferrous metals, was bought in 1982, completing our line of products.

With works in Germany and in U.S.A. the Hille & Müller organization possesses most modern production facilities. A worldwide sales network assures direct presence in the most important markets.

HOESCH

For over a century, the name "HOESCH" has been synonymous with the steel world. Started as a family business in 1871, Hoesch has grown into one of the most important German producers of steel and steel finished products.

Many contributions to technical progress, especially in the fields of metallurgy of iron and the production and processing of steel, as well as strong impetus to industrial development and marketing growth mark the path of this company up to the present time.

Our products range from semi-finished steel to rolled steel in all grades, such as sheets and plates, bars, sheet piling and mining sections. Our processed steel include such coated products as galvanized, plastic-coated sheets and tin plate; special sections, steel strapping, pipe and tubing, as well as castings and forgings. Hoesch is an important factor in the manufacturing of machinery and heavy equipment.

With all this capability, it was only natural that the Hoesch group expanded its activities worldwide, and today has offices and representatives, as well as manufacturing plants, in every major country in the world.

Hoesch America Inc. was started in the U.S. in 1957 and the main purpose was to cover an important market for the Hoesch group. Over the years it led to a steady growth of international trading, including exporting from the U.S. to various countries in the world. Hoesch America became a significant member of the international steel community.

In the 1960's Hoesch decided to further invest in the U.S. and today owns several successful manufacturing plants.

Hoesch Tubular Products Co., Baytown, TX is engaged in upsetting, heat treating and threading of oil country tubular goods. The plain end tubular goods in sizes 2.3/8" through 13.3/8" are manufactured at the Hoesch pipe mill in Germany, imported into the U.S. finished at Hoesch Tubular Products and sold in the U.S. for oil drilling.

Delta Strapping Industries Inc., New York, NY is a manufacturer of plastic strapping tools and seals, and distributor of steel strapping and accessories.

Rotek Inc., Aurora, OH is a manufacturer of bearings, seamless rolled rings and carriage parts, as well as closed die forgings, which are sold to equipment manufacturers of cranes, excavators, dredgers, railway turntables, rotary furnaces, material handling equipment and similar heavy-duty equipment.

PHILIPP HOLZMANN
Aktiengesellschaft

PHILIPP HOLZMANN AG began as a family business before developing to its present significance as a Company with worldwide reputation in the construction industry. The Company, founded by Johann Philipp Holzmann in 1849, was at the beginning mainly involved in railway construction. Business was soon extended to all areas of building and heavy construction.

Today Holzmann is one of Germany's leading industrial undertakings and is ranked among the top international construction companies.

Domestic business is dealt with by the parent company at eight main branches, which have sole responsibility, 25 ancillary branches and a General Contractor's division at the Central Administration for turnkey construction. The technical divisions at the Central Administration back up the sectors involved in construction.

30 subsidiary companies are employed in the specialized field of precast element construction, prefabricated housing, special heavy construction, foundation and waterway construction, road construction, also consulting and off-shoe work, natural stone quarrying and housing administration.

At the internation level HOLZMANN ranks with its volume of construction among the major companies in the industry. In 1983 projects were carried out in 44 countries under the unified supervision of the HOLZMANN group. The subsidiary companies, whose activities as yet have been confined to Germany, are taking over an ever increasing number of contracts abroad.

The Company has been working in other European countries as early as 1882. The first contract in 1893 for railway contruction in Asia Minor marked the beginning of the HOLZMANN tradition in the Near and Middle East. The acquisition of the J.A. JONES CONSTRUCTION COMPANY, Charlotte, NC, and of the LOCKWOOD GREENE ENGINEERS, Spartanburg, SC, extended the sphere of successful international activity to the American Continent.

The widely dispersed geographical locations of the Company's activities are conducive to stability and growth.

In 1983, the Holzmann Group achieved a total building volume of $3.1 billion, 31.0% of this in the Federal Republic of Germany, 35.4% in the USA and 33.6% in other foreign countries (particularly in the OPEC states).

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huels corporation

CHEMISCHE WERKE HUELS was founded in 1938 by what were then I.G. Farbenindustrie AG and Bergwerksgesellschaft Hibernia AG. By 1940 a modern, systematically planned industrial complex had grown up at Marl, on the northern fringe of the Ruhr district. Waste gases from the coal hydrogenation works in the area were used for the production, by the electric arc process, of acetylene, the raw material used at that time for the manufacture of BUNA® synthetic rubber. Since 1944 it has also been possible to employ natural gas as the chemical raw material for the electric arc process. This makes Huels one of the longest established petrochemical companies in Europe.

The second phase of the company's economic development began in 1953, in the course of decartelisation of I.G. Farbenindustrie AG and the conversion of Huels into a joint stock company. The third phase started in 1979, with the incorporation into the VEBA group, which resulted in the chemical activities of VEBA being concentrated on Huels.

Huels employs 15,300 people, 13,000 of them at the Marl works. Training is provided for some 1,100 trainees, in almost 30 professions.

In essentials, the production range comprises: base materials, inorganics and organics, detergent raw materials, thermoplastics, dispersions, polycondensates, surface coating raw materials, synthetic rubber, and products of nitrogen chemistry and agro-chemistry.

Forty-six per cent of Huels' annual turnover of around DM 6,000 million is derived from foreign business. The company produces more than 1,500 sales products which are exported to over 100 countries. Eight home sales offices, numerous agencies abroad, and domestic and foreign affiliated companies testify to the company's worldwide partnership activities.

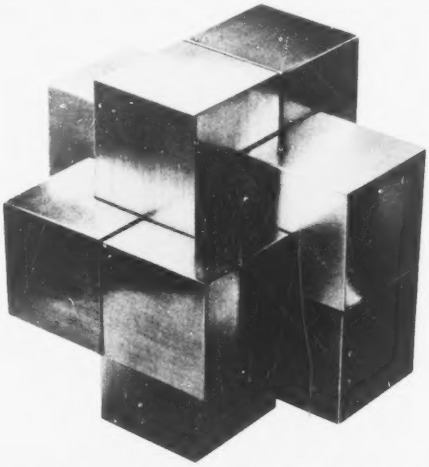
INA BEARING COMPANY, INC. is part of a worldwide organization known for the quality and reliability of its needle roller and other anti-friction bearings.

From its small beginnings in 1945, the company has grown rapidly by pioneering scores of new products. INA Needle Roller Bearings have provided designers in many industries, particularly the automotive and machine tool industries, with a solution to their various problems. Their space-saving design made the use of roller bearings possible where previously only plain bearings were used.

Over the years, the original range of INA Needle Bearings has been extended to encompass a much wider variety of rolling bearings. These include bearings for both light and heavy duty applications, as well as bearings for rotary and linear motion.

Today, more than 14,000 INA employees throughout the world produce over 10,000 different types of precision rolling bearings, of which a high number are made to customers' individual requirements. Specifically, our product line includes a large variety of unit cages, shell bearings, needle roller bearings—radial and thrust, combination bearings, precision ground bearings, ball bearings and spherical plain bearings.

INA Rolling Bearings are manufactured in 16 plants worldwide. A network of 19 INA companies and 26 agencies provide reliable service and excellent communication with our customers.



A knotty problem.

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All worldwide market research together with production and application experience is collated at the parent company in Herzogenaurach near Nuremberg. Thus, a continuous interchange results between the various INA locations and ensures that the latest technology is shared worldwide. This is reflected in the advanced state of the art of all INA products.

In the United States, INA headquarters are located in Bensalem, Pennsylvania where a competent staff of sales and engineering personnel are ready to fill your bearing needs.

IET

INTERNATIONAL EXHIBITS TRANSPORT INC. built an international reputation of first-class freight forwarding service of exhibits from the United States to countries around the world and vice versa. IET is one of the very few companies worldwide which specialized in the transportation of exhibits only since the day it was formed. This means that every person contacted in the company is truly a professional on the subject of handling exhibit material. There are no transfers to a special department. IET believes this way it can give all exhibiting companies and fair organizers the maximum professional service such a specific targeted event calls for.

IET offers companies involved in international trade fairs and exhibitions door-to-door service (delivery to booth) no matter where the show is located or what kind of exhibit material is involved, ranging from high technology goods to heavy machinery.

Services provided include the following: the outlining of deadlines for movement of freight to consolidation locations, shipping costs, methods of transport, necessary documentation, commercial invoices, descriptive forms, shipping labels, sketches for odd-sized cargo, and all other appropriate services. By grouping exhibits for shipment in consolidation lots, the shipper benefits from lower freight rates.

Once cargo reaches its destination, International Exhibits Transport makes arrangements for moving all goods from the port-of-entry to its final site, in cooperation with a local freight forwarder who has been officially appointed by exhibition organizers. Experienced staff from International Exhibits Transport, Inc. is present at the fair site to oversee all final operations and to assist exhibitors.

The main purpose of every exhibition for the participating companies is to sell their products. IET believes that it can make the difference by giving its sole attention to the fact that every exhibitor can focus exactly on this issue and not be distracted by problems and delays of their exhibit material.

International Exhibits Transport is one of the few experienced freight contractors for transporting cargo to international exhibition sites and has become a major factor in the international exhibition industry.

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JAUCH & HUBENER, founded 1919 in Hamburg, today ranks among the top insurance brokers in Europe. The privately-held partnership has 700 employees in Germany and subsidiaries in Austria and Switzerland.

Apart from the employees of the international departments in Hamburg, Mulheim, and Frankfurt as well as the foreign subsidiaries, Jauch & Hubener has representatives in Singapore, New York, Johannesburg and São Paulo.

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international department was established, staffed with specially trained employees, many of them with overseas training and experience.

The goal of this department in the context of UNISON is to develop, coordinate and update international insurance programs. UNISON is an organization founded by leading European insurance brokers and Johnson & Higgins.

Since 1968, international pension plans have been developed in cooperation with EUROBEN, a multinational correspondent company. EUROBEN engages in the development and administration of international Employee Benefit Plans.

A further cofoundation of Jauch & Hubener and its correspondents is PLC (Property Loss Control) Brussels. PLC Brussels offers consulting services for companies similar to those available to American highly protected risks.

In the U.S., Jauch & Hubener works through Johnson & Higgins, one of the largest insurance brokers with 40 offices in this country. The correspondent network of UNISON and EUROBEN firms are equipped with offices throughout the world.

KEMPINSKI
AKTIENGESELLSCHAFT

In response to increasing demand from the USA, the KEMPINSKI HOTEL CORPORATION of Berlin opened a New York sales office on January 1, 1984. The number of Kempinski reservations from America has been rising steadily for years. One key reason: as Lufthansa-affiliated hotels, all Kempinski Hotels can be booked together with the flight at any Lufthansa German Airlines reservation point.

Kempinski Hotels, member of The Leading Hotels of the World, satisfy a clientele which treasures the Old World hospitality of these classic hostelries in the great European hotel tradition. And which welcomes having the charm of bygone days linked with contemporary comforts and amenities.

Long popular with American tourists and business people alike is Munich's Vier Jahreszeiten Hotel. Staying here, right in the very heart of King Ludwig II's domain between the Hofbräuhaus and the Residenz, is an American dream.

In Berlin, Germany's leading cultural center, the prestige address of yesteryear was the Hotel Bristol Unter den Linden. Since 1952, the Bristol Hotel Kempinski on the Kurfürstendamm, West Berlin's showpiece boulevard, has been the No. 1 choice of showbiz celebrities and political dignitaries from the USA.

Back in the days of the transatlantic ocean liners, Hamburg was America's gateway to Germany. Now travelers from the States are rediscovering Hamburg—as the modern-day continental capital of opera and ballet, as well as the gateway to Northern Europe: Denmark, Norway and Sweden. Hamburg's Atlanta Hotel made its debut in 1909 for passengers of the luxury liners.

The Hotel Gravenbruch Kempinski Frankfurt, is the one with the oldest heritage. A onetime manor house, Gravenbruch was first mentioned in official records of 1486—six years before Columbus discovered America. Only minutes from Frankfurt Airport, this historic Kempinski has preserved the casual, relaxed atmosphere of a fine old country estate. US tourists have likewise discovered its merits as a convenient point of departure for European travel. Because from America's vantage point some of "Romantic Germany's" top attractions—the Rhine Valley, Old Heidelberg and medieval Rothenburg—are virtually right in the hotel backyard.

Welcome to Kempinski.

The KIENBAUM Consulting Group, one of Germany's largest and most widely utilized consulting organizations, offers international project management, executive recruiting and management consulting from strategic planning to operational implementation.

The company was founded 1945. Since then, well over 7,000 consulting projects and 7,000 executive recruitment assignments have been completed. The Kienbaum Group has gained a wealth of experience in furthering the interests of foreign clients in Europe and of German clients in the USA.

For further information please contact the offices of Kienbaum International, Inc. on the east coast, Mr. Hans W. Deeken (215) 674 5210 or on the west coast, Dr. J. R. Bechtle (415) 788 0787.

KLOCKNER-MOELLER CORPORATION is a specialist in the low voltage industrial motor control field and is a subsidiary of the Klockner-Moeller Elektrizitaets GmbH in Bonn. A recognized market leader in West Germany, K-M Corp. combines experience, sound engineering practices and customer service in promoting their full line of quality electrical and electronic equipment. This includes motor control center, main distribution boards, circuitbreakers, interruptors, fusible disconnect switches, motor starters, heavy-duty pushbutton units and pilot devices, control relays, and limit switches, engineered custom control panels as well as solid state industrial relays and microprocessor-based freely programmable controllers. Its products are designed and tested to meet all pertinent national and international electrical equipment manufacturing standards.

A unique decentralized corporate structure enables K-M to provide its customers with direct access to first-rate technical service. It has established seven independently operating factory branches located across the U.S.A.

Klockner-Moeller Corporation locations in the U.S.A. are as follows: Fairfield, New Jersey; Atlanta, Georgia; Chicago, Illinois; Houston, Texas; Tulsa, Oklahoma; Los Angeles, California; and San Francisco, California.

GK

GEBRUEDER KULENKAMPFF, founded in 1806, is an international trading company with a worldwide network of subsidiaries, branches and agencies.

In over 175 years of experience, GK has acquired a leading position in its sole import activity—leaf tobacco—as one of Europe's most recognized companies. Gebrueder Kulenkampff is still privately owned and with annual sales exceeding U.S. $125 million ranks among the leading trading houses within the Bremen business community.

In the field of technical products GK has gained a reputation as specialized exporter of machinery, parts and supplies to the minerals processing, mining, energy, power, construction and transport industries.

GK provides international cement manufacturing companies, underground and open pit mines, power plants, refineries, manufacturers and distributors with machinery, process equipment, supplies, diesel parts and a complete range of consumables. GK's specialized parts supply system is aimed at those international mills, mines, processing plants, etc., in need of genuine OEM parts, but

Welcome to Kempinski.

Kempinski is a lifestyle: that of our guests. Here one resides in elegant surroundings, enjoying the casual yet cultivated ambience and mixing with his peers. That's what Kempinski patrons from all the world treasure about "life à la Kempinski".

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An der Alster 72 · D-2000 Hamburg 1
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HOTEL VIER JAHRESZEITEN
Kempinski München
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which find their present purchases too costly. The service provided is particularly directed at plants utilizing German technology.

For the cement and mining industry, GK also renders consulting, erection and commissioning services.

In addition to fifteen active international subsidiaries serving GK's tobacco interests, there are associated companies in Pittsburgh and Bethlehem, PA, U.S.A., and London, England, as well as agencies in Nairobi, Johannesburg and Sydney rendering technical sales support.

GK also has a financial interest in INTERTRACTOR, Gevelsberg, Germany, with a work force of 650, with annual sales of more than U.S. $100 million, manufacturers of crawler undercarriages, OEM suppliers to the world's leading construction and mining equipment manufacturers.

FRIED, KRUPP GmbH of Essen, Germany, with a worldwide reputation as a leader in industrial technology and engineering excellence, has a long-standing commitment to serve the U.S. market in many diversified areas.

Among Krupp subsidiaries and affiliated companies established in the United States are the following:

Krupp International, Inc., of Harrison, New York, has two major divisions. Its Krupp Industrietechnik (KI) Division is active in the fields of bulk materials handling, metallurgical plants, rolling mill installations, cranes, as well as equipment for rubber, vegetable oil seed processing, and drilling equipment for mining and large diameter holes for the oil industry, water wells and foundation work.

The Krupp Atlas Elektronik (KAE) Division of Rahway, New Jersey, serves the marine markets with their radar and collision avoidance systems as well as their sonar-operated fish-finders. Also, for the survey of coastal areas and river beds the KAE Division offers highly specialized survey systems that provides greatest accuracy.

Krupp MaK Diesel Inc. of Glenview, Illinois, is marketing the product lines of MaK in Kiel, Germany, predominantly diesel engines for all types of ships, as well as diesel powered generating plants.

Krupp Steel Products and Krupp Specialty Steel of Houston, Texas, supply the complete range of carbon, alloy and stainless steel grades in shapes and sheets. Forgings go to various US industries.

Polysius Corporation of Atlanta, Georgia, transfers the most modern cement plant technology to the US market.

Krupp Wilputte Corporation of Murray Hill, New Jersey are engineers-constructors of coke ovens and coal chemical plants, related auxiliary machinery, as well as pollution control equipment, systems and devices. Hot Blast stoves and sinter plants are also a part of Krupp Wilputte's technology and expertise.

Krupp Widia Corporation, Deerfield, Mich. is marketing Widia-paperknives and other carbide products and carbide tools.

Dentex Research and Development Corp., New York, as part of Krupp Medizintechnik GmbH activities, is manufacturing dental products as well as its Division Neoloy Products Inc., Posen, Illinois.

LEYBOLD-HERAEUS

LEYBOLD-HERAEUS are successfully meeting for many years the exacting technological challenges of the North American market. Vacuum technology and its process applications today are base technologies indispensable for research, develoment and production in all fully industrialized countries. Neither microchips nor modern data storage media nor high-grade materials for space travel would have been possible without vacuum processes.

Along with the worldwide penetration of vacuum technology and process engineering the commitments of Leybold-Heraeus have expanded all over the world. Originating from the two companies W.C. Heraeus, Hanau, and E. Leybold, Cologne, founded in 1850 and 1851 respectively, Leybold-Heraeus today is jointly owned by W. C. Heraeus GmbH, Hanau, Degussa AG and Metallgesellschaft AG, both in Frankfort/Main, Federal Republic of Germany. Sales have been increasing over the last ten years at an average annual rate of 11% up to 660 million Deutsche Mark of which about 40% have lately been accounting for the US market.

The expenditure for research and development amounts to approx. 8% of the sales figure, and Leybold-Heraeus has thus become the world's largest concern in the field of vacuum technology.

A few examples may illustrate the wide range and depth of involvement of applied vacuum technologies:

—Materials for microelectronics components and their functional films

—Magnetic layers for data storage media

—Optical thin films for spectacle lenses, photolenses and space telescopes

—Infrared or ultraviolet analysis of gases up to systems for displaying traces on transparent materials (dactyloscopy)

—Ultracleaning of reactive and refractory metals, such as titanium, zirconium and their alloys

—Deposition of anticorrosive protective layers on components exposed to high thermal stress

—Vacuum generation systems for preservation of foods up to gas supply systems for carbon dioxide lasers

The activities of the Leybold-Heraeus corporate group, today including 20 subsidiaries, span the globe. The USA occupies an exceptional position as a market of undeniably greatest technological importance in the world. Here the growth rate for Leybold-Heraeus products is higher than the world average. Today already 50% of LH products sold in the USA are produced inside the country. An enterprise offering high technology to such extent requires an adequate organization. Consultation, technical assistance, sales and service are ensured by four US sales and manufacturing corporations:

Laybold-Heraeus Vacuum Products Inc., 5700 Mellon Road, Export, PA 15632: Vacuum pumps, pumping systems, helium leak detectors, vacuum gauges, vacuum accessories and surface analysis equipment.

Inficon Leybold-Heraeus Inc., 6500 Fly Road, East Syracuse, N.Y. 13057: Residual gas analyzers, pressure converters, mass spectrometer systems, vacuum deposition and thin film controllers.

Leybold-Heraeus Technologies Inc., 120 Post Road, Enfield, CT 06082: Crystal growers and production sputtering systems, vacuum metallurgy, electro-optical coating systems.

Leybold-Heraeus Vacuum Systems Inc., 120 Post Road, Enfield, CT 06082: EB welding systems and technology.

In view of the importance alone of the semiconductor industry, we have set up a Leybold-Heraeus branch establishment at the West Coast in San José, CA.

Lufthansa

LUFTHANSA GERMAN AIRLINES increased gross operating revenue by 16.9 percent in the first six months of 1984 and expects to end the year with even better results

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than in 1983. Mid-term operating results rose to 4.17 billion Deutsche marks compared to 3.57 billion for the first half of 1983.

Freight business grew by an exceptional 28.2 percent; passenger revenues were up 14.1 percent and air mail gained 9.3 percent. Lufthansa's 1983 net profit was 63 million marks, up from 45 million in 1982. A seven percent dividend was paid to both preferred and common shareholders on this amount. A five percent dividend was paid the previous year.

Predominantly positive contributions to net profits in 1984 are also anticipated from Lufthansa's subsidiaries—Condor, Delvag, Lufthansa Commercial Holding, Lufthansa Service Co. and German Cargo Services.

This past summer, Lufthansa Commercial Holding, the airline's hotel subsidiary, became the majority stockholder in Penta Hotels. Lufthansa bought 23.15 percent of Penta stock from British Airways and increased its share to 62.27 percent. British Airways retained 8.9 percent, Swissair 16.88 percent. Westdeutsche Landesbank and Union Bank of Switzerland are the other partners in the hotel group. Penta operates 16 hotels worldwide including one in New York; a 17th hotel is scheduled to open in Heidelberg in 1986.

Houston will become Lufthansa's twelfth U.S. and second Texas destination in June 1985. Nonstop service to Frankfurt will operate three times weekly. Dallas/Ft. Worth-Frankfurt service, which began in 1980, operates daily. Lufthansa also began service between Frankfurt and Seoul, South Korea, on October 31 of this year. The weekly 747 flights operate via Anchorage.

Lufthansa's fleet will be expanded next year by two additional Boeing 747-200s, ordered for delivery in May and June, and six new 737s. With 79 Boeing aircraft currently in the fleet, Lufthansa is Boeing's largest customer outside of the U.S. The airline also put its seventh and eighth Airbus A310 into service. Of the total 939 million marks earmarked for investments in the near future, 802 million marks is going to fleet expansion and conversion.

By responding quickly to market conditions in 1983, Lufthansa was able to take full advantage of the start of world economic recovery last year, according to Executive Board Chairman Heinz Ruhnau. Growth in the Federal Republic of Germany, the United States and the Far East in particular led to extraordinary demand. Operating revenues thus increased 8.3 percent to 8.2 billion marks.

Gross income for 1983 was up 8.7 percent to 8.8 billion marks while the growth in expenditures was 8.5 percent. Production increased 6.1 percent to 6.8 billion ton kilometers. This was mainly the result of placing six new Airbus A310s in service and through increasing freight capacity to meet the market demand on Far East routes.

Revenue from flight operations was 7.3 billion marks, an increase of 579 million over 1982. Costs were up just 356 million marks resulting in an operating profit of 110 million marks compared to a loss of 113.5 million in 1982. This was the highest profit on flight operation Lufthansa has ever had.

Other operating areas—such as technical services, flight training, ground services and inflight sales—showed a profit of 170 million marks resulting in a total operating profit of 280 million marks. These earnings were reduced by 217 million marks held as reserves for future contingencies. Lufthansa investments in 1983 totaled 653 million marks.

LURGI

LURGI is a process-oriented engineering company, operating throughout the world. Its main fields of activity are environmental

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protection, upgrading of raw materials and energy technology.

Lurgi has over 200 processes relating to the design, supply and construction of complete turnkey plants, plant units and individual equipment, complemented by a wide-ranging know-how for plant contracting unrelated to a particular Lurgi process, including development of the infrastructure.

The company's nine operating divisions

- Water, Waste and Adsorption Technology
- Inorganic Chemistry
- Air Pollution Control Systems
- Gas Technology
- Coal Technology
- Metallurgy
- Hydrocarbon Technology
- Thermal Processes
- General Plant Contracting

are responsible for the marketing and further development of their know-how.

Lurgi's total capacity for proposal elaboration, project execution, research, development and after-sales service amounts to around 6.3 million hours per annum. Its international organization comprises 17 Lurgi companies abroad, 7 representative offices and agencies in more than 40 countries.

Lurgi has been active in the American market for decades, and since 1979 has been represented by Lurgi Corporation in River Edge, N.Y. and Belmont, CA.

Within the Metallgesellschaft Group, Lurgi constitutes the Corporate Division "Plant Engineering and Contracting."

Activities and Services:

The organization and engineering practices of Lurgi GmbH enable each project to be realized on a flexible and individual basis. Lurgi is not dependent on company-owned manufacture of plant and equipment and is therefore free to select the most suitable manufacturers in terms of quality, reliability and financing, including those in the customer's country or in third countries.

Lurgi carries out consulting, engineering and management activities within the scope of project execution and also offers them a separate service. Experienced specialists provide every kind of service for construction projects, employing the most modern working practices: feasibility studies, proposals, procurement, quality control, expediting, erection and start-up, guarantee testing and training of the customer's personnel are typical features of Lurgi's extensive service program. An experienced project management team is available for every task.

Lurgi organizes the financing of industrial projects on a national or multinational basis. In cooperation with the countertrade specialists of Metallgesellschaft AG, Lurgi also helps its customers with the marketing of their products and develops overall plant concepts, taking in everything from the design and building of plants to plant management and the selling of the products.

Lurgi develops and licenses processes and equipment.

Lurgi tests raw materials and products in its Research and Development Center to determine their usability and to find the most efficient ways of utilizing them and applies the results to industrial practice.

Lurgi GmbH at present has a staff of about 4,000 in Frankfurt and about 1,000 abroad. 3,000 staff-members are engineers and technicians.

The turnover of Lurgi GmbH in 1982/83 was DM 1.8 billion, the flow of new orders DM 1.2 billion and the backlog DM 3.1 billion. All figures are consolidated in the Metallgesellschaft profit and loss statement, and thus Lurgi's financial results are not published separately.

M·A·N

Together with its subsidiaries, M.A.N. forms one of the leading transport, power and mechanical engineering groups in the world. M.A.N. offers complete plants, systems, products and services in the fields of

—Transportation

Trucks, buses and coaches, automotive Diesel engines; rail vehicles, marine Diesel engines, marine propulsion packages; floating docks, floating cranes; fixed and transportable bridges, ship-loaders and unloaders, port and container cranes, electric hoists.

—Power Generation

Steam power plants, steam turbines and steel foundations; heavy components and service for nuclear power plants; Diesel power stations, Diesel generating sets, cogeneration systems; gates, valves and dam equipment for hydraulic power plants; solar farms and wind energy converters;

—Mining and Material Handling

Plant and equipment for underground mining and transport as well as for surface mining (shaft winding plants, trackless vehicles, conveyor systems, stackers and reclaimers).

—Iron and Steel Mills

Plant and equipment for the production of iron, steel, ferro-alloys, non-ferrous metals and the processing of raw materials; jigs for coal preparation plants; steel mill cranes and electric hoists.

—Chemical and Petrochemical Industries

Turbo and screw compressors; heat recovery systems and syngas coolers, chemical waste incineration plants.

—Construction

Pumping stations and irrigation systems, pipeline and tank farm construction, special erection work, construction cranes.

—Printing and Graphic Arts

Sheet-fed offset presses; web rotary presses for offset, roto-gravure and letterpress.

M.A.N. also provides its clients with a wide spectrum of services including feasibility studies, design, engineering, procurement, erection, start-up as well as training of operating and maintenance personnel.

In the United States, American M.A.N. Corporation in New York (Tel: 212/509-4545), Houston (Tel.: 713/680-3020) and San Francisco (Tel.: 415/391-2935) is responsible for marketing, sales and services of M.A.N. products.

M.A.N. Truck and Bus Corp. in Charlotte, N.C. (Tel.: 704/376-6000) and M.A.N.-Roland USA, Inc., a leading manufacturer of printing presses, located in Middlesex, N.J. (Tel.: 201/469-6600) are U.S. based manufacturing and assembly plants.

MBB

The MESSERSCHMITT-BÖLKOW-BLOHM GmbH (MBB) with a staff of 36,800 and a total turnover of DM 5.9 billion (about US $2.1 billion at current exchange rates), is the largest German aerospace company. MBB covers a wide spectrum of activities in the aerospace and defense fields.

Helicopter and Military Aircraft Group

Helicopter BO105 for civil and military purposes; helicopter BK117 for civil purposes; future European Fighter Aircraft technological concept; Tornado, the trinational combat aircraft; Fantrainer, the two-seat training aircraft.

Transport Aircraft Group

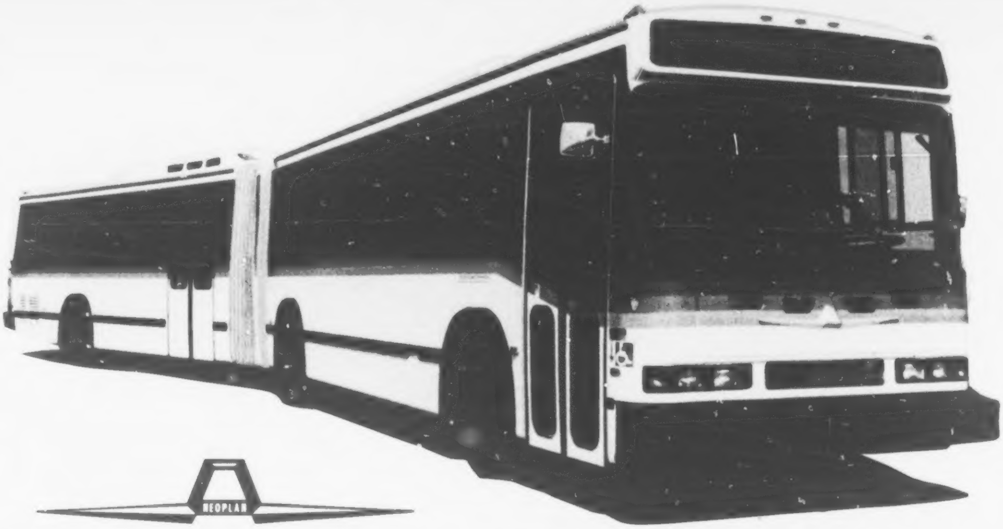
Airbus A300, A310 and A320, the European commercial aircraft; Transall C-160; product support.

Defense Systems Group

Second and third generation anti-tank weapon systems; air-defense weapon systems; anti-ship missiles; modular dispenser systems (captive versions or with stand-off capability); submunitions (1. and 2. generation); reconnaissance systems; electronic systems and components; naval technology projects.

Space Systems Group

Communications satellites ECS, Marecs



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and DFS-Kopernikus; TV-Sat/TDF-1 and Tele-X, the direct-broadcasting TV satellite systems; global communications satellites Intelsat V and Intelsat VI; the Galileo Jupiter probe; Rosat, the x-ray research satellite; GRO (Gamma Ray Laboratory); GIRL, the German Infrared Laboratory; ground stations; Ariane, the European launch rocket (HM7 engine and second stage); the orbital systems Spacelab, SPAS/MOMS and Eureca; the Columbus space station.

Energy and Process Technology

Solar power stations; advanced silicon solar cells; wind energy facilities; biogas facilities; vacuum-super-insulation (VSI) technology.

Industrial Products Group

Integrated CAD/CAM systems; time measurement and information system (BESSY); access control system (BESSY); modular control systems; sensors; printed circuit boards; functional modules; measuring machines; industrial robots; conveying and lifting technology; special machines; vehicle control and information systems; rail cars and train systems; advanced transport systems (maglev train); high performance composite materials; medical lasers (mediLas).

KMG

KLYNVELD MAIN GOERDELER (KMG) is the fourth largest accounting firm in the world with 30,000 professional and support staff in 436 offices throughout the world. Its prominent member firms in more than 60 countries include KMG Main Hurdman in the United States, Deutsche Treuhand-Gesellschaft in Germany, Fides Revision in Switzerland, and Alpen-Treuhand GmbH, in Austria.

In the United States, KMG Main Hurdman maintains a close working relationship with the other German-speaking member firms. Through its 85 offices, Main Hurdman is well qualified to provide accounting related service for German-based companies doing business in the United States and for U.S. firms with interests in Germany.

Auditing Services: Main Hurdman is skilled in the examination of financial statements prepared in response to U.S. or German reporting requirements, and attuned to the needs of the regulatory authorities and financial institutions in both countries.

Tax Services: The firm's wide range of tax services include tax planning; advice and assistance in complying with local, national and foreign tax laws; assistance in dealing with tax authorities, and counseling on tax problems of individuals and corporations. Its fiscal expertise extends to other tax-related areas such as mergers and acquisitions, transfer pricing, expatriate tax services, forms of business organization for multinational entities, offshore financing and operating in duty-free zones.

Management Consulting Services: Main Hurdman's consulting services are designed to assist management by providing professional counsel in disciplines where internal expertise is not available. They include advice on designing and implementing management information and financial reporting systems to meet subsidiary and parent company requirements, designing electronic data processing applications, budgeting, production planning, inventory control and project planning.

All professional services are performed under the constant direction of a Main Hurdman engagement partner, who can draw upon the full resources of the firm, including its national and international tax expertise. For U.S. branches or subsidiaries of German companies, the engagement has the additional support of several KMG-Wirtschaftspruefers assigned to the National Office of Main Hurdman.

MANNESMAN today is an enterprise whose worldwide scope of activities covers the fields of mechanical and plant engineering, production of pipe and tubular products using company-made steel, information technology and electronics as well as trading with its own and externally manufactured products.

The name of Mannesmann is linked to the first process for the manufacture of seamless steel tubes, invented by the brothers Max and Reinhard Mannesmann. The enterprise founded in 1890 was based on their inventions and expanded by adding welded steel tubes to its production range. It has since developed into one of the world's leading producers of steel pipe and tubing.

In a second phase of development, Mannesmann, began supplying its pipe mills with company-made steel. A vertically structured coal and steel concern was formed which not only produced its own raw materials, such as coal and crude steel, but also the finished pipe.

In the Sixties, a further phase of development began: based on decades of experience, the goal was to expand the areas of new technology and to open up new and promising markets. The most significant steps along the way were the divestiture of the ore and coal mines, the division of labor with the Thyssen company, the pipe mills of both companies being merged to form Mannesmann-Roehren-Werke. The acquisition, expansion, and internationalization of Rexroth, the hydraulics manufacturer, the acquisition of Demag, a world-renowned manufacturer of machinery, and the further development of the piping construction division into Mannesmann Anlagenbau were further steps in the framework of this phase of development.

The commitments entered into by Mannesmann in the market of informatics in the years 1981 and 1982, were another necessary step to secure the future of the enterprise even more, and thus to make jobs safer. The acquisition of Hartmann & Braun (measuring and automatic control systems), and Kienzle Apparate (data systems technology), as well as an interest in ANT Nachrichtentechnik (communications technology) are proof of the fact that the once chosen way to broaden the technological basis of the enterprise and to open up new markets of growth for it, is consistently followed up. Purposefully, Mannesmann is thus changing into a technology concern.

The capital stock of about DM 1.1 billion is held by approximately 180,000 shareholders, about 53,000 of whom are active or retired members of the Mannesmann staff.

In the US, the Mannesmann organization includes the following companies:

Mannesmann Capital Corporation, New York, NY

Mannesmann Oilfield Tubulars Corporation, Houston, TX

Mannesmann International Alloys, Inc., Sugar Land, TX

Mannesmann Pipe & Steel Corporation, Houston, TX

Mannesmann Demag Corporation, Cleveland, OH

Mannesmann Demag Wean Company, Pittsburgh, PA

The Rexroth Corporation, Bethlehem, PA

Mannesman Tally Corporation, Kent, WA

Argo Instruments, Inc., Winchester, VA

Barrett Electronics Corp., Northbrook, IL

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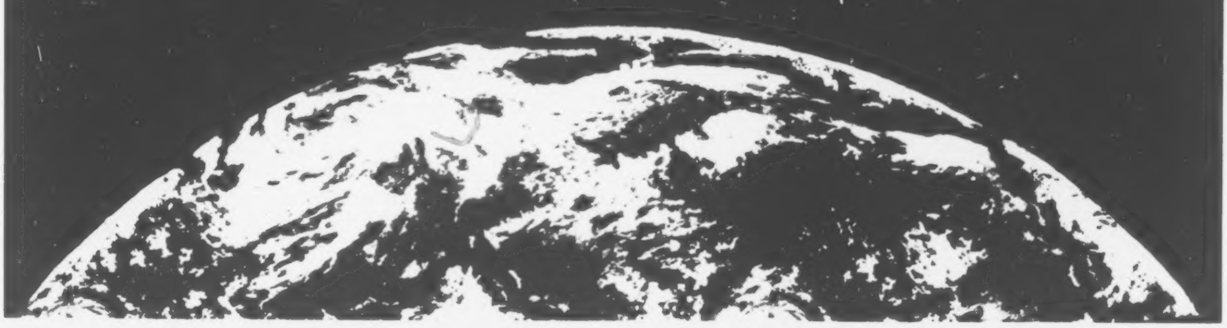

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The company has ten partner firms representing the United States, Australia, Belgium, Canada, France, Italy, Germany, Japan, The Netherlands and the United Kingdom. In Germany our offices are located in Frankfurt and Hamburg. Serving over 300 corporations and institutions the network brings together the resources of nearly 300 professionals in 20 offices worldwide. In addition, the company maintains associate relationships with more than 50 regional firms in Europe, the Middle and Far East, Africa, and North and South America.

Each partner agency is managed by a recognized and respect professional within their country and fully staffed with carefully selected and trained personnel offering clients the benefits of local experience, expertise and language in each particular region.

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The earliest American activities of the world's oldest automaker, the DAIMLER-BENZ AG, can be documented back to 1888—eight years before Henry Ford's famous Quadricycle—when an agreement was signed between Gottlieb Daimler and John Steinway, the famous American piano manufacturer. Steinway spent the next 19 years producing under license a number of Daimler products, including engines, light trucks and passenger cars.

From these beginnings, the Stuttgart firm has broadened its American horizons to include three major subsidiaries:

—MERCEDES-BENZ OF NORTH AMERICA, distributor of Mercedes-Benz passenger cars, Unimogs and industrial engines, with headquarters in Montvale, N.J.

—Freightliner Corporation, the manufacturer and marketer of medium-duty (Mercedes-Benz) and heavy-duty (Freightliner) trucks, with headquarters in Portland, Ore.

—Mercedes-Benz Credit Corporation, a multi-faceted finance company, with headquarters in Norwalk, Conn.

(Freightliner is covered in more detail elsewhere in this report.)

MBNA has a sales and service network comprised of 428 passenger car dealers supported by seven zone offices (New York, Washington, Jacksonville, Houston, Chicago, Los Angeles and San Francisco); six vehicle preparation centers (Belcamp, Md., Jacksonville, Chicago, Houston, Los Angeles and San Francisco); and five parts distribution centers (Franklin Township, N.J., Baltimore, Jacksonville, Chicago and La Mirada, Calif.)

The company completed a new parts distribution center in Franklin Township during 1984. A second new parts center will be completed in early 1985 at Harmons, Md. (These facilities replace smaller ones in Teaneck, N.J., and Baltimore). A new office building/training center adjacent to the corporate headquarters in Montvale was also completed in 1984.

MBNA also owns and operates two passenger car retail outlets, in New York.

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MBNA's subsidiaries include Mercedes-Benz Canada, distributor of Mercedes-Benz passengers cars as well as medium-duty diesel trucks in Canada, with headquarters in Toronto, and Mercedes-Benz Service Corporation, which conducts exhaust emission tests at two laboratories in Michigan and Colorado.

The Mercedes-Benz Credit Corp. is a financing unit which provides assistance to the various dealer groups (and their customers) of the North American vehicle distribution companies (MBNA and Freightliner).

These three firms employed 6,400 persons last year, approximately 3.4 percent of the 185,000 Daimler-Benz employed, in more than 170 countries. The Stuttgart firm produced a total of more than 700,000 passengers cars and commercial vehicles during 1983. The leading market outside of West Germany for the company's passenger cars continues to be in the United States, where MBNA's dealers sold 73,692 units in 1983. Daimler-Benz subsidiaries in the United States are organized under the Daimler-Benz of North America Holding Company.

The METALLGESELLSCHAFT AG was incorporated in 1881 as a joint-stock company to carry on a longstanding Frankfurt metal trading business. In the course of the 100 years which have passed since then, Metallgesellschaft continuously expanded its activities by establishing new or acquiring existing plants and by merger with or participation in other companies. Today, the group of companies thus formed presents itself as a widespread organization in the fields of basic materials and capital goods as well as engineering and construction.

Metallgesellschaft belongs to the important enterprises of the West German industry; with a consolidated turnover of about DM 10 billion it occupies roughly 26th place. The MG Group with almost 25,000 employees worldwide engages in the exploitation and benefication of ores and industrial minerals for supply to its own smelters or chemical plants. Part of the metals produced as well as metals from other sources are processed into semi-finished and finished products in works of the Group. Together with the metal processing goes the manufacture of plastic goods by similar technologies. Metallic components of ores and their sulphur content form a basis for the production of chemicals, especially sulphuric acid, sulphur dioxide, white pigments, filters, barium, caesium, lithium and sodium compounds.

The trade in raw materials which was originally restricted to metals and ores, now also extends to other commodities: Sulphur, phosphates, fluorspar, alumina, rubber, coal and crude oil. The tasks connected with production, distribution and trading made it advisable to provide integrated transport and insurance services. The financial transactions of MG performed on an international scale are entrusted to its own bank.

The technological know-how, especially in the fields of ore preparation and smelting, chemical production, petroleum processing, upgrading of solid fuel, and environmental controls is offered on a world-wide basis by the Group's engineering companies. This extensive diversification is reflected by 5 Corporate Divisions which are grouped into 22 different Operating Divisions three of which are Trading Divisions. These Operating Divisions are largely independent and responsible for current business.

Metallgesellschaft Services Inc., New York, specialists in counter trade and barter, serve a wide variety of corporate and government clients.

MUNICH FAIRS-INTERNATIONAL

The MUNICH TRADE FAIR CENTER benefits from the outstanding infrastructure features offered by Bavaria. International trade fairs and exhibitions in Bavaria are highly qualified forums sending out impulses and constituting indispensable places of encounter for the respective industries and business sectors involved.

Conversely, the Munich Trade Fair Center is an undisputable bonus for Bavaria in its role as a partner to the world economy. Munich's status among West Germany's trade fair centers is beyond all doubt.

From 1973 to 1983, the number of exhibiting companies at the Munich Trade Fair Center increased by 106.5%, namely from approximately 10,000 to 20,645. The number of visitors went up by 90.1%, i.e. from roughly 1,000,000 to 1,901,308. The growth rate in occupied (gross) hall surface area was 50.2%, meaning an increase from c. 800,000 sq.m to 1,201,321 sq.m.

The events program comprises 36 trade fairs and exhibitions in Germany. If one summarizes the activities of the MESSE MÜNCHEN INTERNATIONAL Group in Germany and abroad, the resultant figure is c. 180 events in 1983—ranging from MMI's own international fairs to trade fair participations in Germany and abroad, and to marketing campaigns for the German export industry. This figure represents an enormous range of variation.

In 1983, the MESSE MÜNCHEN INTERNATIONAL Group effected a total turnover of approximately 161.9 million DM. Of this figure, 93.4 million DM are accounted for by the Munich Trade Fair Corporation (MMG), c. 17 million DM by the 'Mode-Woche-München GmbH' (the fashion show organizers), c. 28 million DM by the IMAG—the International Trade Fair and Exhibition Service—and approximately 23.5 million DM by the GHM—the Handicraft/Light Industries Trade Fair Corporation. These figures speak for themselves. Their underlying factor is an organizational concept that guarantees success.

The Center's management implements a *trade fair policy* based on the following important principles:

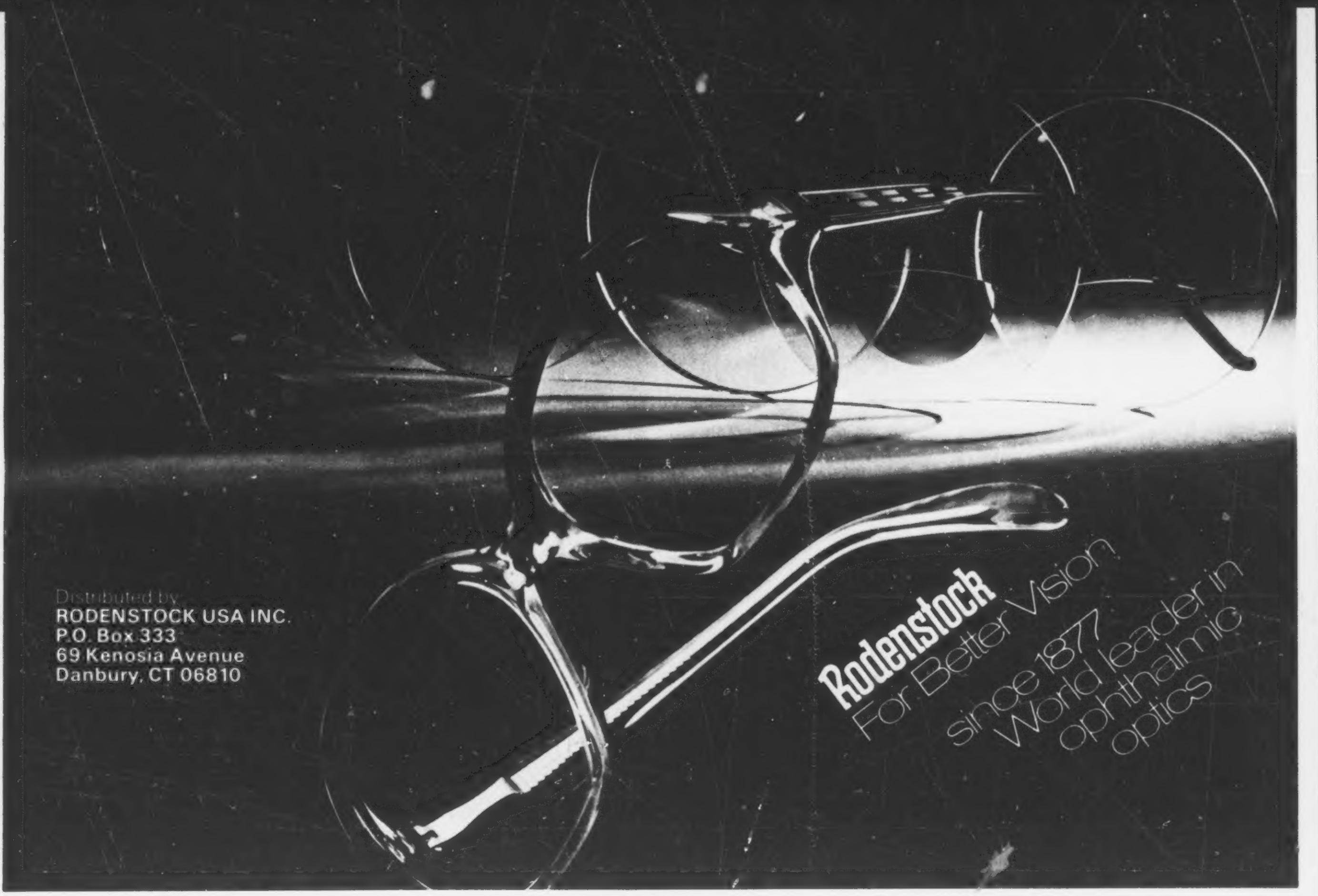
The trade fair business is a symbiosis of entrepreneurial elements and existing organizational ties.

Due to their structure, the trade fair corporations are partially integrated in the public sector. In Munich, considerable effort is put into attaining a permanent equilibrium between the free play of market forces and the "public" element, i.e. the town halls and ministries. This is coupled with a continuous process of coordination with the market partners and the Advisory Boards. The capacity for integration and consensus are indispensable elements of the management policy.

The existing *trade fair program* covers a broad spectrum. The focal points, such as in electronics, the building industry and medicine, are the result of demand orientation. The program has such a wide 'spread' that one can safely accredit it with a certain crisis stability.

Accounting and auditing—Our reputation for auditing is the culmination of decades of constructive service provided to many of the leading companies in the world. Price Waterhouse worldwide provides services to more large multinational companies than any other accounting firm. Our basic service is the examination of financial statements and the expression of our opinion thereon. Our audits are based on a thorough understanding of national and international rules, regulations, customs, and knowledge of the unique compliance requirements of individual industries.

In addition to examining annual financial statements, we have an established reputation for conducting special financial investiga-



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tions, acquisition reviews and other engagements where quick response, sound analysis, independence, and integrity are critical.

Tax—Price Waterhouse has a worldwide tax network which enables us to provide tax services for clients unequaled by any other professional organization. To help our clients minimize their tax burdens, Price Waterhouse offers a variety of services, including comprehensive tax planning, preparation of tax returns, assistance with tax audits, requests for rulings, tax planning for acquisitions and mergers, tax planning for executives, and specialized tax services for expatriates and nonresident aliens. In addition, we have developed computer-based systems that calculate foreign source taxable income, foreign tax credits, earnings and profits, and earnings repatriation.

We prepare a series of guides that provide comprehensive information on accounting and tax regulations, investment climate, and other business issues in individual countries. Of special interest to German/U.S. businesses are information guides on *Doing Business in Germany, Doing Business in the United States, U.S. Acquisitions, U.S. Citizens Abroad, Foreign Nationals in the U.S.*, and *Doing Business in the European Communities.*

Management consulting services—Our worldwide complement of experienced consultants can provide practical advice on all facets of business operations, including financial management, information processing, EDP and inventory control systems, and office productivity. Our management consultants help businesses define their goals and develop and implement the strategies, organizational structures, and information systems necessary, to effectively achieve them.

The *location* is Munich—a favourable geographic situation with the South and South-East of Europe close at hand, with an outstanding infrastructure, competitive advantages and a flair such as no other German city can offer.

The *trade fair grounds*—the historical product of nearly 80 years of growth and experience—experienced the most significant improvement in quality since its inception with the extension of its southern building sector in 1983.

In Munich, the objective is no longer expansion, but *consolidation*. This is to go hand in hand with the improvement of the actual product—i.e. quality enhancement and internationalization of both supply and demand sides of the fairs.

It is the felicitous *combination* of Munich as a trade fair location with great motivation potential and the trade fair policy that produces this success. But the interplay of favourable location and infrastructure within and around the trade fair center with the management and a heterogenous, and thus "crisis-proof," program is not the sole element leading to the final result.

As in any other field, you can't succeed without people who are willing to apply themselves fully to the task at hand. The "Munich trade fair policy" achieves its effectiveness in the combined multiplexity of location, policy and management—and to do that you also need a little bit of luck.

NEOPLAN USA CORPORATION

Slightly more than one hundred years ago, Lamar, Colorado began life as a transportation center; a place where railroad tracks, cattle trails and the Arkansas River converged. Today it maintains that identity in a modern way as the home of NEOPLAN USA, manufacturers of top quality buses.

Product versatility is one key to the success of the NEOPLAN SYSTEM. NEOPLAN's buses range in size from their Litl' Bus, a 26 passenger shuttle-type that is proving highly popular for airport applications, to their heavy passenger traffic handlers, the double-decker and articulated buses. Since the Lamar plant was built in 1981, more than 2000 buses have rolled out its gates to serve over 37 cities across the United States. A particular point of pride for NEOPLAN in 1984 was being privileged to build 415 buses for Los Angeles, to help transport the hundreds of thousands of visitors who attended the Summer Olympic Games.

NEOPLAN USA's buses combine the best of European design with an extremely high percentage of U.S. manufactured components; one of the highest ratios in American-built buses. The positive reaction of customers to this partnership is evidenced in NEOPLAN's amazing capture of 25% of the market share in 1983.

NEOPLAN USA's buses begin with steel tubing, precisely cut to size in the first department of the plant. Welders assemble these pieces in huge jigs to create NEOPLAN's unique monococue skeleton, the basis for all NEOPLAN bus design. Proof of its superiority can be found in the crash test results run on all models, which far exceed Federal White Book safety standards.

The success of NEOPLAN USA led to the development of several support facilities in other parts of the country. There are NEOPLAN Customer Service Centers on each coast; one in Los Angeles and the other in Montgomeryville, Pennsylvania. The Montgomeryville operation also houses NEOPART, which deals in replacement components, and a branch of NEOPLAN COACH SALES, mostly involved with selling luxury touring buses manufactured in one of the NEOPLAN factories based in Germany. A second manufacturing facility is being planned for Honey Brook, Pennsylvania.

With the mounting concern over pollution and the problem of already over-crowded parking lots in American cities, there is an ever-growing market for dependable transit buses built for fuel economy and years of all-weather service. NEOPLAN USA looks forward to a long and profitable future serving the nation's transportation needs.

NIXDORF® COMPUTER

NIXDORF develops, manufactures and markets computer systems and peripherals of data and information processing. The company is one of the leading manufacturers in the international computer industry.

The Nixdorf sales and service network covers 39 countries with the emphasis on Western Europe and the USA. The company is also active in Australia, Japan, Hong Kong, Singapore, Korea, New Zealand, on the Philippine Islands, in Latin America and in Africa.

Nixdorf Computer and peripheral systems are produced on an international job sharing basis. Factories in Germany are located in Paderborn, Berlin and Cologne. Outside Germany, production plants have been established in Ireland (Bray/Dublin), Spain (Toledo), America (North Reading, Mass.) and Singapore. Whereas the plants in Ireland, Spain and Singapore mainly provide individual parts for further processing in Germany, the North Reading plant produces complete systems for the American and other markets.

The Nixdorf development activities are also based on international cooperation. The American development sector has been carefully built up in order to ensure direct access to the internationally most significant technology market.

Nixdorf users are both medium-sized companies and large industrial, commercial and service companies, as well as public administration. These customers are supported by a sales and service organization largely run by Nixdorf itself. In Germany and in some other countries, this network is supplemented by agents for the company. Nixdorf employs approximately 17,500 personnel (31st December 1983). Most of the staff are concerned with service functions such as consulting, organization, technical service and trading. These services are available to the user in all phases of computer implementation, offering well-informed market-oriented support.

The workstation-oriented design of the computer systems and the capacity for branch-related specialization in the sales and service organization are decisive factors in the Nixdorf applications and market concept.

And the success of this concept is reflected in the steadily increasing market shares in Germany and world-wide.

NORTH AMERICAN LIFE AND CASUALTY COMPANY is a member of the Allianz of America family of companies, a growing German-owned insurance group in the United States.

NALAC provides Universal Life policies, term insurance, annuities, disability insurance and accident as well as stop loss coverage for self-funded health insurance plans.

Established in 1896, the Company was purchased by Allianz in 1979. Life insurance in force has grown to over $15 billion. The company is licensed in 49 states (Preferred Life in New York) and now ranks among the top 5% of all life insurance companies doing business in the United States today.

Best's Insurance Reports, accepted by the life insurance industry for its fair and comprehensive reports on insurance company operations, has assigned NALAC an "A+" (Excellent) rating. This excellent rating reflects Best's opinion of the relative strength of NALAC compared with other companies, based on averages within the life and health insurance industry.

NALAC's Industrial Life Insurance Division concentrates its marketing efforts toward the independent producer or broker. Regional Sales Offices offer to such independent producers products and services which are primarily designed for the business and business owner.

Mass marketed Group Insurance Products are specifically designed for Associations and self-funded plans.

Based on its specific strength in the business insurance market and as a member of a worldwide operating insurance group, NALAC has committed itself to the Germany American business community. As coordinator of the Group Insurance program for the Germany American Chamber of Commerce, NALAC is a central partner in this service package for small to medium-sized companies. NALAC is extremely responsive to German American businesses—large or small—so that these companies can benefit from knowledge, understanding and financial strength.

The State NORTH RHINE-WESTPHALIA provides a special consultation and information service for firms wishing to invest in a project within the state. The ECONOMIC DEVELOPMENT CORPORATION (GfW) is a public body which has been advising investors for more than 25 years. Its principal task is to enhance and develop the state's economic structure.

This means promoting the founding and location of companies in North Rhine-Westphalia as a whole and providing information for those lacking knowledge about investment in the state.

Service is offered, both to the domestic medium-sized investor who must find his way through the complicated system of financial

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support schemes and environment protection regulations, and to the foreign investor not familiar with state's economy.

The GfW gives its help free of charge and supports interested firms in all phases of their investment study and planning. Services are tailored to meet requirements of individual projects. All services, it goes without saying, are strictly confidential.

Irrespective of the size of the project involved, this service includes the following:

—Examination of the Advantages and Disadvantages of Alternative Locations

—Information about Suitable Commercial and Industrial Areas

—Environment Protection

—Energy Supply and Waste Disposal

—Transport System

—Labor Market (wages, social security benefits, etc.)

—Establishment of Contacts with Municipal and Local Authorities, the Ministries and Other Institutions (such as banks, trade associations and chambers of commerce)

—Public Financial Aid for Investors

Economic Development Corporation
for North Rhine-Westphalia
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Telephone 02 11/13 00 00,
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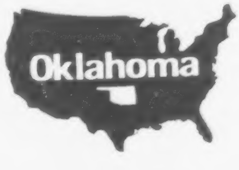

More than 600 manufacturing plants chose OKLAHOMA as their location the past ten years. Here is why:

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(2) Oklahoma is located in the center of that tier of warm climate states which are most prosperous and fastest growing in America.

(3) Oklahoma has 40 outstanding technical training schools and five skill centers to train workers for specific jobs in new industries.

(4) Oklahoma offers a transportation system to suit every need—railroad, truck, air and a waterway exit to the sea. Economical transportation is thus available for both national and international shipping.

(5) Land costs are low because Oklahoma is a young, vibrant state of energetic people which is just now being settled by industrialists and manufacturers. This year marks only the 77th year of Oklahoma statehood.

(6) Financial assistance is available through a state agency to support new industries through second mortgage financing of land and buildings, up to 25%.

Come visit Oklahoma. The profitable Place To Be. See the great progress made since Oklahoma was Indian Territory just 77 years ago.

PREUSSAG

PREUSSAG was founded in Berlin in 1923. The Company, originally purely mining oriented, is today engaged in mining, smelting and trading of metals, plus transportation, energy and construction.

PREUSSAG AG, parent company of the PREUSSAG Group, ranks, with a share capital of DM 400 Mil. and approximately 13,000 employees, among the top 50 industrial enterprises in West Germany. The sales of PREUSSAG Group (world) in 1983 totalled DM 12.5 billion.

The Metal Division's business includes prospecting, exploring, smelting and processing of non-ferrous and pure metals with a total smelting capacity of 175,000 mt of zinc and 160,000 mt of lead. The London-based Amalgamated Metal Corporation PLC (AMC) and its Group Companies are active in international metal trading, in tin smelting and in other activities.

A leasing fleet of about 25,000 rail tank cars, 57 inland waterway ships and various inland and seaport tank farms form part of the services of the Transport Division. Furthermore 95 OSA supply ships are providing worldwide services for offshore drilling and production activities.

Natural exhaustion of domestic oil and gas production deposits led PREUSSAG to international exploration activities, partly concentrated in the United States, by participating through affiliated companies and subsidiaries in oil and gas producing properties, i.e. offshore Louisiana.

The main activities of the Construction Division in Germany and abroad are excavation, pipeline and waterworks construction and fire protection equipment.

Price Waterhouse

PRICE WATERHOUSE provides accounting and auditing, tax, management consulting and other specialized services to a diverse, worldwide clientele. The firm originated in 1849 and to the present day has remained in the forefront of the accounting profession throughout the world. Our strong, multinational organization is uniquely structured to provide professional services responsive to our clients' needs and to the national environments in which we practice with uniform quality control standards. Over 26,000 professionals serve our clients in more than 340 offices in 95 countries and territories.

To further extend the scope of services, Price Waterhouse and Treuarbeit, the large German Accounting firm, have entered into a cooperative agreement. The cooperation agreement provides an expanded base to serve German businesses inside and outside the Federal Republic of Germany. Price Waterhouse and Treuarbeit's range of services, depth of experience and diversity of clients results in the collective resources needed to provide superior and distinctive services. A total staff of over 1000 professionals including 230 Wirtschaftspruefer is located in offices in Berlin, Bonn, Bremen, Dusseldorf, Frankfurt, Hamburg, Hanover, Kassel, Kiel, Munich, Saarbrucken and Stuttgart.

Accounting and auditing—Our reputation for auditing is the culmination of decades of constructive service provided to many of the leading companies in the world. Price Waterhouse worldwide provides services to more large multinational companies than any other accounting firm. Our basic service is the examination of financial statements and the expression of our opinion thereon. Our audits are based on a thorough understanding of national and international rules, regulations, customs, and knowledge of the unique compliance requirements of individual industries.

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RASCHIG

After several years of preparatory work, the **RASCHIG CORPORATION** set up operations in Richmond, Va. in September 1982, to find a new market outside Europe.

Here is what Raschig Corp. offers: fine chemicals, tower packings, plastics, foundry additives, RALUMAC road maintenance, and road marking material.

After having weighed several different aspects, we decided to settle in Richmond, Va., within easy reach of railway, road, barges and vessels ensuring quick deliveries from Germany.

We expect that the U.S.A. will intensify their efforts in the field of road maintenance carried out with our well-known RALUMAC system. With RALUMAC, an improved road safety at reduced costs will be obtained. Growing sales of our RALUMAC license partners in the U.S.A. prove the efficiency of our RALUMAC road maintenance system.

The Richmond area offers a skilled staff for our sophisticated RALUMAC system as well as for other specialty products (fine chemicals) sold through our Richmond subsidiary. Our co-workers will be trained thoroughly in Germany.

After nearly two years of pioneering work, we have re-cultivated most of the plant area of Raschig Corp. along the James River. Part of our many re-constructed and modernized brick-stone warehouses are for rent. Some of them have already been rented because of their favorable location. German companies have chosen the Richmond team of Raschig Corp. as their helpful assistant for their U.S. activities.

The high quality of Raschig products and its well-trained team will help introduce and establish the Raschig products in the U.S.A.

Please contact the Raschig team for further information. Let them be your efficient partner.—Raschig Corp.

Rodenstock

The **RODENSTOCK GROUP**, with headquarters in Munich, is one of the world leaders in ophthalmic optics. The family-owned company entered its second century of operatons in 1977 under the management of Professor Dr. Rodenstock, currently the president of the Federation of German Industries (BDI).

In addition to three plants and eleven branches in Germany with over 6,000 employees, there are three German and eleven foreign subsidiaries with several manufacturing facilities.

Rodenstock products cover a wide range: opthalmic lenses, a comprehensive line of plastic and metal frames and sunglasses, precision optics for commercial, industrial and scientific applications including photo-graphic, enlarging, reproduction and X-ray objectives as well as a complete line of ophthalmological refracting and diagnostic instruments and automatic processing equipment for opticians.

In the United States the Group maintains the following operations:

Rodenstock USA, Inc., Danbury, CT
Rodenstock Corporation, Yauco, PR
Rodenstock Precision Optics, Morton Grove, IL

Refracting and diagnostic instruments produced in Germany and the WECO instrument line are represented in the United States by Coburn Optical Industries.

Steady growth and expansion have marked Rodenstock's engagement in the United States in recent years.

Salomon Brothers

One of the oldest and largest investment banking firms in the United States, SALOMON BROTHERS has a worldwide reputation for innovation in corporate and governmental capital raising and a strong trading and risk orientation. Securities purchases and sales surpassed the $2 trillion mark in 1983. The year's average daily net inventory of securities was $8.4 billion. The firm's capital at the end of the year was a record $1.27 billion.

In 1983, Salomon Brothers surpassed all U.S. investment bankers as lead manager of domestic debt and equity securities offerings and was first in volume in private placements and mortgage finance. In both the domestic and international markets, it developed some of 1983's most creative financings, helping clients raise $91 billion in capital.

Salomon Brothers has long been noted for its risk orientation in the service of clients as it underwrites and trades on an international scale. With affiliates in London and Tokyo, the firm is one of the largest securities traders worldwide, dealing in a full range of financial instruments in the principal currencies. Trading activity is at the center of everything that Salomon Brothers does. It is a primary source of intelligence from the world's major financial markets, and it provides a base for assessing relative securities values in multicurrency dimensions. Some 500 trading and sales professionals utilize advanced computer-linked communications that constitute one of the world's most powerful securities distribution systems.

Another outstanding capability of Salomon Brothers is its economic and financial research, which is integrated with customer and market intelligence flowing through the trading rooms. Under the direction of Henry Kaufman, original research is performed via three departments—Bond Market Research, Stock Research and Bond Portfolio Analysis—by a total of more than 80 professionals, with 50 statistical and support personnel.

Research products include analyses of domestic and international fiscal and monetary policies, credit flows in the U.S. economy, currency-related securities values, yield differentials, corporate capitalizations, institutional portfolio strategies and analytical reports on industries and corporations. The Bond Portfolio Analysis Group performs a highly sophisticated service for institutional investors, advising customers on the structure of portfolios.

Salomon Brothers' performance is achieved through global teamwork. The firm integrates its skills and experience in investment banking, market making, research and marketing, and combines this approach with a readiness to commit substantial capital.

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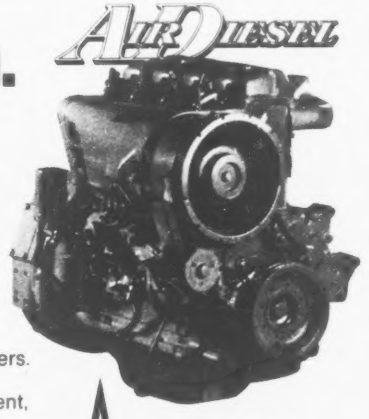

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By far the most important of these is our tradition of people-to-people personalized service. At Schenkers you'll always be talking to and dealing with dedicated transportation professionals, and, in many cases your own account executive. Schenkers adheres to some other rarely found, but important guidelines. Guidelines such as "promises kept"—goods delivered on time, on target, and on budget.

Schenkers is conscious of its leadership position in the industry, and its obligations. Our tradition of innovation, if you will. The company pioneered many of the services and features you've come to take for granted in a transportation company. For example, it was Schenkers that pioneered the concept of money-saving freight consolidation. Schenkers was also one of the first companies to embrace freight containerization with all its labor and cost advantages.

When you select an international freight forwarder, big is definitely better. With a larger firm, you get choice, not chance. Schenkers maintains over 400 offices, spanning 5 continents and over 100 countries. There's also the choice of 100 dedicated air freight centers, and a matching 100 maritime offices in key seaports around the globe. On land, sea, or in the air, Schenkers delivers.

It's 10 AM. Do you know where your shipments are?? Schenkers has made the commitment to assemble, build and operate what is probably the state-of-the-art communications/computer system for a transportation company. All this—tradition, people, facilities, and our vast computer/communications network—is ready and waiting to assist you. One stop, full service. With offices in major cities across the USA, chances are, we're neighbors. Why not give us a call??

SCHOTT SCHOTT™
GLASS TECHNOLOGIES INC.

Commencing operations in 1969, SCHOTT GLASS TECHNOLOGIES INC., Duryea, Pennsylvania has grown to be the United States' foremost manufacturer of scientific optical glass. With the exception of its parent, Schott Glaswerke, the firm offers the world's most comprehensive variety of optical glasses.

Since the founding in 1884 of the original Glastechnisches Laboratorium Schott und Gen., the Schott name has been synonymous with quality and innovation in glass. Schott Glass Technologies Inc. not only follows in this tradition, but has developed many new glass types for special applications within the Western Hemisphere. This is exemplified by the recent completion of Schott's latest expansion—one of the most modern glass research and development laboratories. Schott is now conducting research for Western Hemisphere customers right here in the United States on a much broader basis.

Schott Glass Technologies Inc. manufactures precision glass products for a multitude of scientific applications. The industries can be broadly described as ophthalmic, scientific optical, as well as numerous highly specialized markets.

Among the ophthalmic products manufactured by the firm are spectacle lens blanks made of traditional white and colored glasses, as well as photochromics, safety, and special purpose glasses. The firm was awarded the Industrial Research IR-100 Award for developing High-Lite®, a special glass which allows high prescription spectacle lenses to be made with the introduction of SunMagic®, a photochromic sunglass lens which is featured in many of the world's most fashionable sunglasses.

The mainstays of the precision optical product line include over 400 types of glasses to satisfy the needs of optical instrument makers in the Western Hemisphere. Augmenting these glasses are specialty products, such as highly sophisticated laser glasses, radiation shielding glass, scientific color filter glass, glasses for fiber optics applications, and glasses for CRT's and other displays. Many new developments are for specialty applications in the military and industrial fields.

Schott officers are: Franz E. Herkt, President; Henning Fuhrmann, Vice President of Operations; and John G. Gulbin, Vice President of Finance.

Cristallerie
Zwiesel
Germany

Although one of the biggest and most famous glassware companies in Europe, Schott-Zwiesel in the 1960's was little known in America. "Zwiesel who?" was the standard reaction of buyers upon hearing the name—a severe handicap in a market with a high degree of brand name consciousness.

Schott-Zwiesel began to assert more direct control over the marketing and ultimate success of its products in 1974, when it became a wholly-owned subsidiary of its over 100 year-old West German parent, itself a member of the Schott Group, a world-wide specialty glass conglomerate.

The timing was most propitious since a new trend in taste among American consumers was emerging in the latter half of the Seventies—a greater interest in fine food and wine and the proper way to serve them at both everyday and entertainment occasions. After careful market evaluation, Schott-Zwiesel assembled a selection of the most appropriate stemware patterns, casual glasses, accessory pieces and heat-resistant serveware. It sought to offer the highly individual approaches to styling, the great variety of designs and cuttings demanded by a public placing increased emphasis on expressive table settings in potash crystal, lead crystal and other glassware.

By the spring of 1982, a Hotel and Restaurant Division was formally established to systematically explore and develop the market for institutional glassware. Since that time, Schott-Zwiesel has enjoyed a substantial growth in this area as well.

In November 1982 Schott-Zwiesel dedicated a sparkling new 2,300 square foot showroom in the prominent New York Merchandise Mart at 41 Madison Avenue in New York City.

Another milestone was marked at the start of 1983. Schott-Zwiesel, having outgrown its former facilities, moved to a new 46,000 square foot office and warehouse complex in Yonkers, New York. Strategically close to New York City and its sea and airports, this new "home" offered Schott-Zwiesel a proper setting in which to maximize service to its growing list of customers.

Today it offers the American market a product line of almost 1000 items, sup-ported by a well-coordinated communications program involving national advertising in consumer and trade magazines, product publicity, public relations and direct mail promotions. In addition, Schott-Zwiesel offers comprehensive trade catalogs and consumer literature as well as point-of-purchase material and the increased use of gift packaging, all designed to promote sales and establish and enhance brand identity. Most instrumental, ultimately, in Schott-Zwiesel's outstanding sales growth record is its coast-to-coast team of 14 independent sales organizations, operating 12 regional showrooms and

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BDO is an international accounting firm which offers special accounting, auditing, taxation, financial and management advisory services to German companies and individual investors with business interests in the United States.

BDO is a leading firm worldwide, with more than 280 offices in 46 countries, and some 10,000 partners and staff. The firm is a partnership of prestigious national accounting firms in each country. In the United States, our German clients are served by SEIDMAN & SEIDMAN/BDO, a 75-year-old firm with offices in 40 U.S. cities. Our German partner firm, Deutsche Warentreuhand-und Kontinentale Treuhand-Aktiengesellschaft, (DWT/KT) is among the largest firms in Germany, with offices in Hamburg, Berlin, Düsseldorf, Frankfurt/M., Hannover, Kiel, Lübeck, Munich, Stuttgart, and Wiesbaden.

At Seidman & Seidman/BDO, work for German clients is under the direction of a resident Wirtschaftsprüfer and Steuerberator who is also a licensed CPA. We are presently serving a substantial number of U.S. subsidiaries of German parent companies. Our bilingual professionals are fully informed about complex and changing American accounting and tax regulations, and thoroughly familiar with German auditing, accounting and reporting requirements. They have expertise in all major industrial and financial fields.

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STO INDUSTRIES, INCORPORATED, headquartered in Rutland, Vermont, is the American subsidiary of STOTMEISTER GmbH in Stühlingen-Weizen, West Germany, one of the world's largest manufacturers of protective and decorative synthetic resin wall coatings. STO products are recognized worldwide for their versatility, durability, thermal properties, cost savings and attractive appearance.

Historically, operations commenced in 1936 when Wilhelm Stotmeister secured a one hundred year old lime and cement business. Stotmeister & Company was to become a leading manufacturer not of lime, but of a new type of plaster which could successfully be applied to all types of substrates in both interior and exterior applications. In 1955, Stotmeister founded the Ispo Putz Company—the first manufacturer to produce and market the new synthetic-resin coating product under the name of ISPO Plaster.

Within a ten year span and after intensive research, development and refinement, the first STO Full Thermal Insulation System was installed on a high rise. The rapid dissemination of STO products which followed was coupled with the expansion of existing facilities and by the creation of new manufacturing plants, sales offices and distribution centers throughout Europe. Stotmeister GmbH now operates the largest and most technologically advanced automated production facility in the industry.

Today, the product line for the STO network of companies includes:

- exterior full thermal insulation systems
- interior and exterior plasters and paints
- protective wall coating materials
- concrete restoration systems
- acoustical insulation systems

STO Industries, Incorporated, established in 1979 as STO Energy Conservation, Inc., is a direct result of the US expansion of Stotmeister GmbH. The construction of a major production facility in Rutland, Vermont in 1980 also marked twenty-five years of STO synthetic resin development and production. In a relatively short period of time, STO Industries has firmly established itself in the U.S. through the successful marketing of STO Full Thermal Insulation Systems and STO Synthetic Resin Wall Coatings.

High quality STO materials and technological expertise have been selected time and again for a multitude of major building projects. Those representing such clients as BMW, Porsche, The Olympic City in Munich, AT & T, IBM, and the U.S. Army Corps of Engineers, stands as testimony to STO's worldwide reputation of excellence. STO coating products were the ideal choice for the authentic restoration of New York City Hall. With the only exterior insulation system approved for installation in New York City, STO Industries successfully met New York's requirements and fire codes for non-combustible materials—the strictest in the world

STO Industries has already doubled in size and production capacity—a reflection of the growing market opportunities for STO materials in the United States. A southern regional distribution center was established in 1981 and over twenty-five distributorships are in operation covering more than twenty-five states.

Corporate headquarters, central production and research and development facilities for Stotmeister GmbH remain in Stühlingen-Weizen with numerous manufacturing facilities and sales offices in Switzerland and Germany, distribution companies in Austria and France, and joint ventures in England and Scandinavia.

THYSSEN

THYSSEN INC., a wholly owned subsidiary and member of the West German Thyssen Group, is a holding company for Thyssen interests in U.S. and international trading and has its headquarters in New York City.

The steel products of the Thyssen mills as well as industrial products of various Thyssen enterprises have been sold in the U.S. for many years. As the demand for these products

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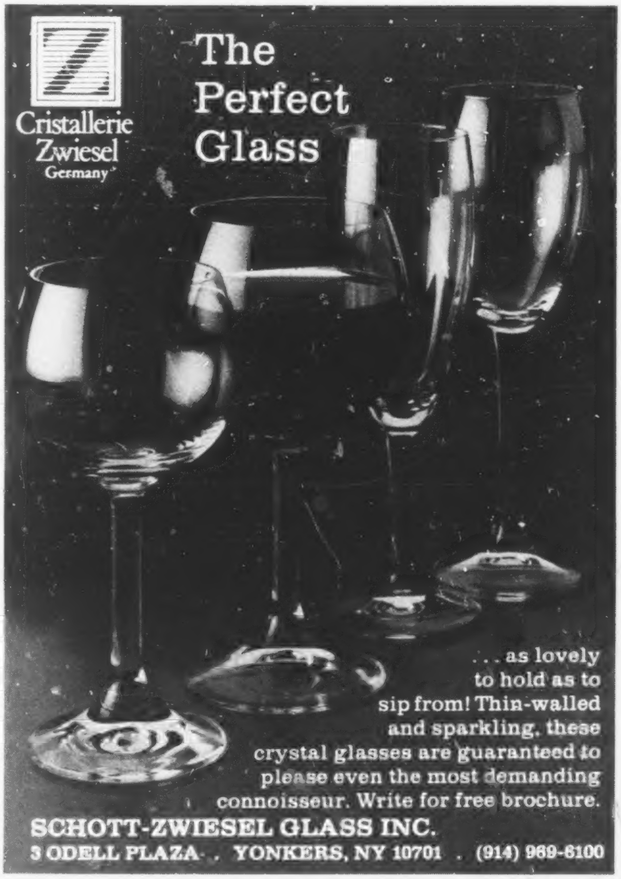

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increased, it became necessary for the Thyssen Group to establish a company to facilitate communications, order entries, and more complete penetration between Thyssen and its customers.

Thyssen Inc. was founded in mid-1959. Since its formation, Thyssen Inc. has continually expanded its U.S. and international operations by adding various new lines of activities to the original business of importing steel. As a result, Thyssen Inc.'s organizational set-up was restructured in the beginning of 1981 with the formation of two subsidiaries, Thyssen Steel Co. and Thyssen Carbometal Co. TRT (Thyssen Rheinstahl Technik) and Thyssen Mining Equipment continue to sell and distribute forgings, castings and other industrial products as well as mining equipment, operating as divisions of Thyssen Inc.

Thyssel Steel Co. expanded its direct domestic sales representation with offices in Houston and Los Angeles and with the formation of divisions and/or subsidiaries to handle and establish various additional lines of business.

In the 1970's, Thyssen Steel Co. entered the domestic market of steel warehousing with the establishment of Thyssen Metal Service/Southwest and later on with Thyssen Metal Service/Southeast, Thyssen Metal Service/West Coast and Thyssen Steel Detroit Co. These steel service centers and distributors supply the Southwest, Southeast, Northeast, the Midwest and Great Lakes areas and the West Coast respectively with rolled steel products.

At the same time, Thyssen Carbometal Co. established a worldwide business in raw materials, mainly coal and iron ore, steel scrap and secondaries, semi-finished steel as well as fertilizers and industrial chemicals.

Today, the combined operations of Thyssen Inc. employs almost 300 people in various parts of the country. The company's activities include international steel and raw material trading, warehousing and steel service center operations in the U.S., as well as sales of industrial products and mining equipment.

With such dynamic growth, Thyssen Inc. has become a major factor in the domestic steel community and in international trading.

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Transatlas Air-Division with offices in Frankfurt/M-Kelsterbach and JFK-New York, Jamaica has rapidly grown to an international airfreight forwarding organization. Founded in 1969 by Mr. W.J. Korbach and O. Czeschka, both are 50% owner and President in Stuttgart, 52% owner in Frankfurt/M-Kelsterbach and 55% owner in JFK-Jamaica. Managing partners in Frankfurt/M, each with 24% of the shares are Dr. D.W. Bloch and W.M. Sprunk, President and partner in New York is Mrs. N. Meyer, with 15% of the shares in New York, Vice President is Bill Meyer.

Transatlas Air-Division, Stuttgart, started the International Transatlas Group by selecting worldwide the most active, specialized, independent airfreight-forwarders, most of them acting as air-consolidators, customs house brokers and trucking companies.

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The name Transatlas Air-Division stands for German quality in international air-transport. We live up to our slogan: "The confidence of those we serve, is the foundation of our progress." Please try us—you will like our services. We like to be of service to you!

UNION AIR TRANSPORT GmbH, with its U.S. headquarters in Baldwin, NY, was established in the U.S.A. in 1959. UAT is an affiliate of UNION-TRANSPORT GmbH., headquartered in Duesseldorf, West Germany, a full-fledged organization in transportation of people and goods by air, ocean and over-land: Its 2,500 employees provide all phases of the forwarding, travel, warehousing and customs brokerage industry.

UNION AIR TRANSPORT, under the guidance of Hans J. Haefner, Vice President and General Manager for U.S.A. and South America, expanded rapidly and now has a vast network of facilities throughout the Americas. All branches operate from UAT managed terminals, staffed with modern equipment and highly experienced employees.

A central computer, located in Baldwin, NY, keeps track of all the daily operations and automatically posts all transactions of the various branches in the U.S. Our fully automated branches now offer a tracing system, allowing our customers to tie into our data base to retrieve information concerning their export shipments.

UNION AIR TRANSPORT is continuously looking for better and more efficient ways of moving freight, and better communication with customers.

1984/85 should be a banner year for UNION AIR TRANSPORT, not only because it is UAT's 25th anniversary, but its 25th year of continued success and growth.

VAW
aluminum

V.A.W. OF AMERICA, INC. has been operating in Ellenville, New York since October 1965. The company, wholly owned by Vereingte Aluminum-Werke AG-Bonn, is a major producer of aluminum billet and semi-fabricated products. The V.A.W. Ellenville plant consists of an aluminum casting operation for the production of over 100 million pounds of billets in various sizes and different alloys. This constituted the basis for construction of the firm's extrusion presses and its tube drawing and rigid conduit production facilities.

Since 1979, V.A.W. has been operating a second plant in the United States, located in St. Augustine, Florida. This plant produces the same range of extruded and drawn aluminum products and is equipped with the most advanced electro-static paint line, enabling V.A.W. to supply coated aluminum extrusions and tubing.

In the area of aluminum extrusions, V.A.W. operates seven large presses covering the entire range of shapes from small, lightweight profiles for the building market, to heavy and complex configurations in various aluminum alloys for the construction, transportation and electrical industries. A major specialty in extrusions has been the development of close tolerance tubing and pipe, used for example in lighting standards and sailboat masts. Through years of technical development, V.A.W. expertise in these areas has led to major breakthroughs for the fabricating industry.

Another major product line is drawn aluminum tubing. The availability of advanced equipment (such as cable hydraulic draw benches), combined with technical leadership in the area of tube drawing, has enabled V.A.W. to become a major supplier of tube for consumer durable products and, in particular, outdoor lawn and garden furnishings and other specialty markets.

Over the years, V.A.W. of America has achieved a position as a leading supplier of rigid aluminum conduits for the electrical industry, and distributes aluminum conduits through a network of warehouses throughout the United States.

The V.A.W. operations are backed by a complete R & D and testing laboratory. The laboratory utilizes diverse testing equipment, including ultra-modern electro-spectrographic analyzing machinery.

V.A.W. plans to apply its knowledge and expertise through the years to ensure its continued position as a major supplier of extrusions and tubing to the growing aluminum market in the United States.

PHILIP VAN SLYCK INC.

Founded in 1966, PHILIP VAN SLYCK Inc. is a New York-based research and consulting firm serving the strategic planning and marketing needs of foreign companies entering or operating in the United States market.

We conduct industrial and high-technology market surveys, covering market segmentation, distribution patterns, growth trends and competitive dynamics.

We analyze and screen merger and acquisition opportunities, and identify inward and outward licensing opportunities for foreign companies in the United States. We also help foreign manufacturers identify appropriate U.S. distribution channels and partners.

Our research is carefully tailored to client requirements through close, on-going consultation. PVS's small size affords flexibility and ensures the highest degree of professional commitment in all phases of client projects.

For further information, please contact Helen Maisels, Vice President, Philip Van Slyck Inc., 21 East 40th Street, New York, N.Y. 10016, Telephone (212) 684-6745/Telex 238790.

VEREINS- UND WESTBANK is a large regional bank, domiciled in the north of Germany with its head office in Hamburg and represented by more than 260 branches in the constituent States of Hamburg, Schleswig-Holstein and Lower Saxony of the Federal Republic of Germany.

The bank is organized as a private banking corporation and engaged in all areas of modern banking.

In the area of loans and credits the bank offers a wide range of accomodation. Further major emphasis in the business structure lies in the area of securities transactions: the bank administers, manages, buys and sells on behalf of its customers, portfolios of stock shares and fixed interest bearing securities.

Foreign business has always been a sturdy pillar of its business, growing stronger every day. The international business of Vereins- und Westbank continued to concentrate on the handling and short-term financing of Germany foreign trade. Vereins- und Westbank devoted particular attention to the export financing of capital goods.

In order to be able to cope with the growing needs of the clients, Vereins- und Westbank has reorganized and increased the personnel of the bank's international department.

A multitude of intensive globe-encircling contacts with corresponding banks apart, the foreign activities are supported by its subsidiary, Vereins- und Westbank Internationale S.A. in Luxembourg, which now provides access to the increasingly important area of financial activities known as Euro-business.

In New York the bank maintains a representation for the observation of the market to provide information to its customers, to establish contacts and to offer consultancy-services.

The Vereins- und Westbank opened a state agency in Miami to handle the banking needs of its corporate and private clientele.

The new branch of Vereins- und Westbank commenced business on November 1, 1983. The branch will initially concentrate on handling and financing trade related business with Latin American countries. In addition the branch will expand trade related business with German and U.S. clients and offer comprehensive private banking services to an international high net-worth clientele.

VILLEROY & BOCH

VILLEROY & BOCH TABLEWARE, LTD., originally founded as Ceramar Incorporated in 1969, was converted into a wholly owned Villeroy & Boch subsidiary in 1976 under the direction of Carlo H. Piccoli. Villeroy & Boch Tableware is charged with the marketing of the company's dinnerware, giftware and collectibles, and a growing fine crystal capability most recently augmented by the parent company's acquisition of Josephinehutte glassworks.

Villeroy & Boch products can be seen in showrooms in Atlanta, Boston, Chicago, Dallas, Los Angeles, Seattle, and the organization's 41 Madison Avenue location in New York.

Since its entry into the American marketplace, Villeroy & Boch has registered a remarkable and steady sales growth. The hallmark of its products is the creation of designs and patterns which transcend style trends or fashion fads, and which are expanded upon with the addition of serving pieces, cookware, bakeware, and accessories. Additionally, the company has established a Hotel and Restaurant Division to help it gain a greater share of that lucrative market. Villeroy & Boch, in fact, sets the tables of some very prestigious institutions, including

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several Sheraton hotels across the country, La Cote Basque restaurant in New York, Spago in Los Angeles, and Le Francais near Chicago.

Another market where Villeroy & Boch has established inroads is collectibles. The company's Limited and Art Products Division has developed collector plate and stein series which have become treasured art and important investments for collectors. This division is in the process of expanding, adding to its designs with limited edition art products including reproductions from the world-famous Mettlauch Museum, where ceramics from Villeroy & Boch's 236-year history are on display.

Finally, Villeroy & Boch has intensified its marketing efforts in the U.S. and undertaken a more aggressive communications program which encompasses both advertising and public relations. It has made great strides in a short amount of time and continues to increase its prominence within the market.

The Ports of Virginia

Unification of the state owned general cargo terminals—Norfolk International Terminals, Inc., Portsmouth Marine Terminal and Newport News Marine Terminal—was accomplished in early 1983. As a result, the port was then able to be marketed as a whole.

During that same year, the VIRGINIA PORT AUTHORITY and its terminals operating affiliate, Virginia International Terminals, Inc., moved to the World Trade Center in downtown Norfolk. In effect, the World Trade Center became the focal point for the maritime/transportation industry in the Port of Hampton Roads.

That move to the World Trade Center thus began a series of events culminating in increased trade through the port.

The VPA implemented an international marketing program that was coordinated with the port community--forwarders/brokers, steamship agents, etc.—the terminal operators, the VPA and VIT Board of Commissioners. The program was designed to market all aspects of the port with the cooperation of the port community.

Along these same lines, VEXTRAC, the Port Authority's export trading company was created. VEXTRAC is an extension of the marketing department of the port authority, and has, since its inception, been successful in establishing liaisons with overseas importers and domestic exporters. Only a few months ago, VEXTRAC was certified by the Department of Commerce. VEXTRAC has been the only export trading company that has received this type of certification from the U.S. government.

Moreover, the Port Authority and U.S. Customs have jointly produced the ACCEPT program, which automatically releases 80 percent of all import cargo coming into the port without inspection, thus increasing the flow of cargo through the port.

The VPA bought the computers by which Customs can identify these import cargoes through their main headquarters in Franconia, Maryland.

This year also saw the coming of the jumbo vessels into the Port of Hampton Roads. Atlantic Container Lines, Barber Blue Sea, Evergreen Lines and United States Lines brought their super TEU vessels—each carrying on the average about 2,500 twenty-foot containers—into the port. Hampton Roads has now become a regular port of call for these large container carrying vessels, making the port a mid-Atlantic load and distribution center for the cargo.

Topping the list of this year's events was the 30th anniversary of P.L. 480, or AID cargo, which was held at Norfolk International Terminals. U.S. Secretary of Agriculture, John R. Block, made a few keynote remarks before he and other officials lifted a bag of AID cargo onto a pallet. The agricultural commodities were being sent to drought stricken countries in West Africa.

VOLKSWAGEN OF AMERICA, INC. was formed in October 1955 as a wholly-owned subsidiary of Volkswagenwerk AG, Wolfsburg, West Germany. Originally established as the official importer of Volkswagens to the United States, VWoA has also served as the official importer of Audi models since 1969.

VWoA corporate headquarters is located in Troy, Michigan. Marketing of cars imported and manufactured by VWoA is through distributing companies which serve two separate dealer networks—one authorized to sell and service VWs and the other handling Audi vehicles.

Manufacturing divisions within VWoA include an assembly plant in Westmoreland, Pennsylvania, a sheet metal stamping plant in South Charleston, West Virginia and an air conditioning and automotive component plant in Fort Worth, Texas.

Volkswagen of America also established separate financial subsidiary companies in 1981 to provide automotive financing support for its VW and Audi dealers. The subsidiaries are VW Financial Corporation, which provides required financial funding, and VW Credit, Inc., which, in agreement with Chrysler Financial Corporation, implements a program of dealer wholesale financing as well as customer retail lease financing.

Under the direction of Noel Phillips, President and Chief Executive Officer, VWoA is also responsible for developing national sales programs, preparing and distributing technical and sales literature, developing and supervising training programs for service mechanics, maintaining inventory control over replacement parts, producing and placing national advertisement, administering insurance programs and conducting many other activities to ensure the continued success of Volkswagen and Audi in the U.S. market.

WACKER

Founded in 1914 by Dr. Alexander Wacker, WACKER-CHEMIE GmbH, Munich, with sales of over DM 2.0 billion, ranks today among the 100 largest industrial companies in the Federal Republic of Germany.

Operations began with the first synthetic production of acetaldehyde, acetic acid and acetone on an industrial scale. Pursuing its production and market opportunities, the company expanded its business during the past decades with the addition of plants and subsidiaries in Germany and abroad. Partners throughout the world were licensed. We invented polyvinyl-alcohol, the polymerisation of polyvinyl chloride in suspension, and the production of acetaldehyde through direct oxidation of ethylene.

Today Wacker-Chemie is one of the leading enterprises in the German chemical industry. The commodity plastics and polyvinyl chloride produced in large plants in the Burghausen and Cologne works in Germany, form the basis for its large scale operations. With the development of special grades, the company succeeded in securing sales at a high volume that is the prerequisite for efficient production.

Polyvinyl acetate, used for many different applications, is one of the important product groups. Copolymers and terpolymers containing ethylene are pioneering new applications in this sector.

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tional business of Wacker-Chemie. They are used in many variations for surface treatment.

In 1948, Wacker-Chemie began to produce silicone and silanes. They are offered today in a wide variety of types and represent one of the principal pillars of the sales program. It is supplemented by highly dispersed silicic acid and by silicon carbide.

Our subsidiary Wacker-Chemitronic Gesellschaft fuer elektronik-Grundstoffe GmbH is one of the world's leading producers of pure silicon. In the product's largest market, the United States, it is produced in the Portland, Oregon plant of Wacker Siltronic Corporation.

Wacker-Chemie is now embarking on the manufacture of optical fibers for the communications industry.

Wacker-Chemie pays particular attention to the development of new product applications in keeping with the needs and wishes of the processing industries.

Ward Howell International

The executive search industry is, more and more, becoming a professional service recognized and utilized by commerce and industry in the same manner as other consultants such as audit, legal or investment banking.

There are probably well over 2000 search consultants in North America with annual industry sales of $300 million or more. WARD HOWELL INTERNATIONAL, with some 60 partners and 200 employees, ranks among the top five firms in size, both in fee income and number of offices and partners. There are now 17 offices in the US, Europe, Latin America and the Pacific Region serving more than 600 clients annually.

During 1985, the company expects to serve a large number of overseas clients in the USA, as both Japanese and European companies continue to expand their US subsidiaries despite the strength of the US dollar. 1984 was a record year in the search field and we expect to increase our revenue in 1985.

WestLB

WESTDEUTSCHE LANDESBANK ranks among the largest banks in the world with a total group business volume of more than DM 181 billion. It was formed in 1969 as a result of a merger of the Rheinische Girozentrale and Provinzialbank, an institute based in Duesseldorf with more than a century of banking experience, with the Landesbank fuer Westfalen Girozentrale, founded in Muenster in 1832.

WestLB is incorporated under public law. Its owners and guarantors are the State of North Rhine-Westphalia, the regional authorities of the Rhineland and of Westphalia-Lippe, and the associations of the regional Sparkassen in those two areas. WestLB is both clearing and partner bank to the 160 Sparkassen of North Rhine-Westphalia, whose assets total DM 177 billion. As part of its cooperative working relationship with the Sparkassen WestLB also handles the foreign business of their clients. In addition, WestLB acts as a state and municipal bank. By virtue of its large portfolio of fixed interest mortgages and the savings contracts of its Building and Loan Association (LBS), WestLB is one of Germany's most significant construction financing banks.

As a universal bank with an emphasis on long-term financing, WestLB is able to provide its private, commercial and public sector clients both in Germany and in foreign countries with a comprehensive range of financings and investment services. In addition to export and import financings, WestLB's range of services for its internationally active clients includes international loan and bond financings in D-mark and Eurocurrencies, as well as financings in local currencies through its branches and affiliates abroad. This network also enables WestLB to meet clients' needs for cover in all currencies and to handle their international payment transactions.

As a major force in the domestic and foreign capital markets, WestLB is in a position to offer investment opportunities in a broad variety of bond issues—in either D-mark or foreign currencies—as well as in shares and mutual funds. The Bank's range of services for investors also includes portfolio management and the launching of special investment funds.

WestLB New York offers a broad spectrum of flexible banking services tailored to the needs of the multi-national firms already doing business in the United States. WestLB's capability to package its financing to suit U.S. market requirements ensures its clients of direct access and immediate fulfillment of demand for both financing and investment services.

The Bank's presence abroad and its participation in internationally operating financial institutions make WestLB a strong partner for all engaged in international business.

WINTER

The Winter Organisation in the U.S.A. is represented by ERNST WINTER & SON USA, INC., Lynbrook, New York, and a manufacturing facility, DIAMOND WINTER, INC. Travelers Rest, South Carolina. They actively sell the full line of Winter superabrasive products for the U.S.A. and other American markets. Both companies are wholly owned subsidiaries of Ernst Winter & Sohn Hamburg, W. Germany, a family company founded in 1847—now the world's third largest producer of superabrasive diamond and CBN tools for industry.

With Diamond Winter Inc., Travelers Rest, S.C. now in full production of diamond ID sawblades for the electronic industry and diamond rollers for the mechanical industry, Winter can offer more rapid delivery and technical service on these important industrial products for our U.S.A. customers.

We offer two sources for Winter products: those manufactured in the main Winter factory in Norderstedt, W. Germany, and now in the U.S.A. With two sources of supply in different parts of the world, the Winter Organization can assure its U.S.A. customers of a continuous reliable supply, plus a wide exchange of technical experiences and information acquired in the two large industrial markets of the Americas and Europe.

Winter USA, Lynbrook, N.Y., maintains large stocks of Winter USA-made products for the electronics industry plus other superabrasive products for the mechanical and stone industries made by Winter factories in W. Germany, Greece and Brazil. As a full-line superabrasive tool manufacturer for the mechanical, electronic and natural stone industry, the Winter USA Organization provides both engineering and commercial assistance to USA customers by both the USA based staff and from engineers and technicians from West Germany.

The Winter team effort in the U.S.A, Ernst Winter USA in Lynbrook, New York and Diamond Winter Inc. S.C. in South Carolina are ready to serve both the end-user market and the many OEM customers in the USA, plus provide backup to European machine tool builders who market their machines with Winter-made superabrasive wheels and tools to USA customers.

OTTO WOLFF OW

OTTO WOLFF, headed by the Cologne-based OTTO WOLFF AG, is an international enterprise. The Group operates in a wide field of trade and production, with steel processing and machine and industrial plant installations representing the company's strongest sectors.

One prime center of activity is the production and distribution of tinplate, cold rolled sheet and electrical sheet. Incorporating all the latest functional technology, these materials meet the diverse demands of the packaging, automotive and electrical industries.

Rolling mill products such as profile steel, reinforcing bars and other construction elements, wire mesh, screws, but plastics goods as well, round out the program and show the emphasis laid on supplies in the fields of infrastructure.

Another significant part of the Group's activities involves construction of highly specialized and complex technical apparatus. Whether in precision machines or measuring instruments, drilling rigs, earth-movers or material handling systems, heavy machines or complex industrial equipment, Otto Wolff's predominance in achievement and technology is beyond question.

With a constant eye on the market, ready to adapt Group structure to change, with first rate service and distribution performance and with strong financial power, Otto Wolff is a reliable and trustworthy partner.

International marketing, based on a range of the Group's own overseas subsidiaries and agencies, guarantees rapid adaptation to current market trends.

The United States market has been acquiring growing importance in Otto Wolff's international operations as the continuous expansion of the US-network shows. Today the Group is represented by the Otto Wolff US Holding Corp., Houston/Texas affiliated to which the Otto Wolff America Inc., Chicago, San Francisco and Houston/Texas, cover the key regional areas.

With Hurricane Industries Inc., Houston/Texas, the first production unit in the States joined the Group in 1980. Their diversified program in steel bars, drawn wire, wire rods and mesh and their strong sales organization, are expected to give major impulses to Otto Wolff US business activities.

ARTHUR YOUNG

ARTHUR YOUNG is an international accounting firm which specializes in providing assistance and counsel to those already in the United States or to businesses who may wish to consider an investment there. We have studied formally and extensively the experience of investors in the U.S. as evidenced by our surveys with the Dutch, Swiss, and The Netherlands Chambers of Commerce, copies of which are available by writing Herb Morey, Arthur Young, 277 Park Avenue, New York, NY 10172.

Arthur Young has 87 offices in the U.S., six offices in Germany and over 350 worldwide. We provide international accounting, auditing, tax, management consulting and other advisory services to help you maximize the likelihood of a successful U.S. venture.

We believe it may be critical to have the assistance of a firm of knowledgeable U.S. financial consultants with special competence in the industries in which you are interested. Arthur Young has the resources and the prestige in the U.S. and worldwide to provide this assistance.

Working closely with you, Arthur Young's professionals can be very helpful in such areas as: pre-investment planning, relations with banks and other sources of capital, tax planning and international tax advice, merger reviews, accounting records and systems, independent audits and special reviews, man-

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Arthur Young's network of more than 85 offices in the United States can be an especially valuable asset to the foreign investor concerning local business conditions, opportunities, government regulations, and relations with businessmen, bankers, government representatives, and other professional advisors.

You can contact Arthur Young locally, or call the National Director of International Investor Services in New York. The firm has an excellent guide, "Doing Business in the U.S.A.," which can also be obtained by writing Mr. Morey at the address given above.

CARL ZEISS, INC., is a part of the worldwide Zeiss organization headquartered in West Germany. Since its establishment as the U.S. subsidiary of its German parent 57 years ago, Carl Zeiss, Inc. has constantly expanded its presence in the American market as a sales, marketing, and service organization of precision products for industry, for the scientific community and for the consumer—products which have set world standards for nearly one and one-half centuries. Zeiss' commitment to uncompromising excellence has consistently defined the state-of-the-art in such diverse areas as precision machines for industrial measuring, optical systems for industrial applications, surveying instruments, aerial cameras, light and electron microscopes, surgical microscopes, ophthalmic diagnostic instruments, telescopes and planetaria— to name a select few. Beyond the Zeiss industrial, medical and scientific products, Zeiss also offers a line of riflescopes, binoculars, sporting glasses, low vision aids and high fashion eyeglass frames and sunglasses available through professional ophthalmic dispensers. With a nationwide sales and service network, the Carl Zeiss, Inc. organization has grown to nearly 400 employees.

Zeiss' unique capabilities in combining the mechanics, precision optics and advanced electronics have paved the way for significant industrial advances, most recently in the field of metrology, a science which dates back to man's first need for a formal method of linear measurement. The Industrial Measuring Technology Division of Carl Zeiss, Inc., markets high performance, computer-controlled coordinate measuring machines. Incorporating a unique probing system designed by Zeiss, measurements can now be made in the incredible range of millionths of an inch. These machines, used as a quality control tool for cost-effective measurement of precision production parts such as turbine blades or componens of an internal combustion engine, are rapidly replacing the time consuming task once required of measuring parts manually with traditional hand-held gauging instruments. Today, Zeiss provides an entire industrial measuring technology product line to serve the needs of diverse major industries, such as automotive, aeronautic, computer, defense and energy. Another Zeiss achievement which advances the state of technology.

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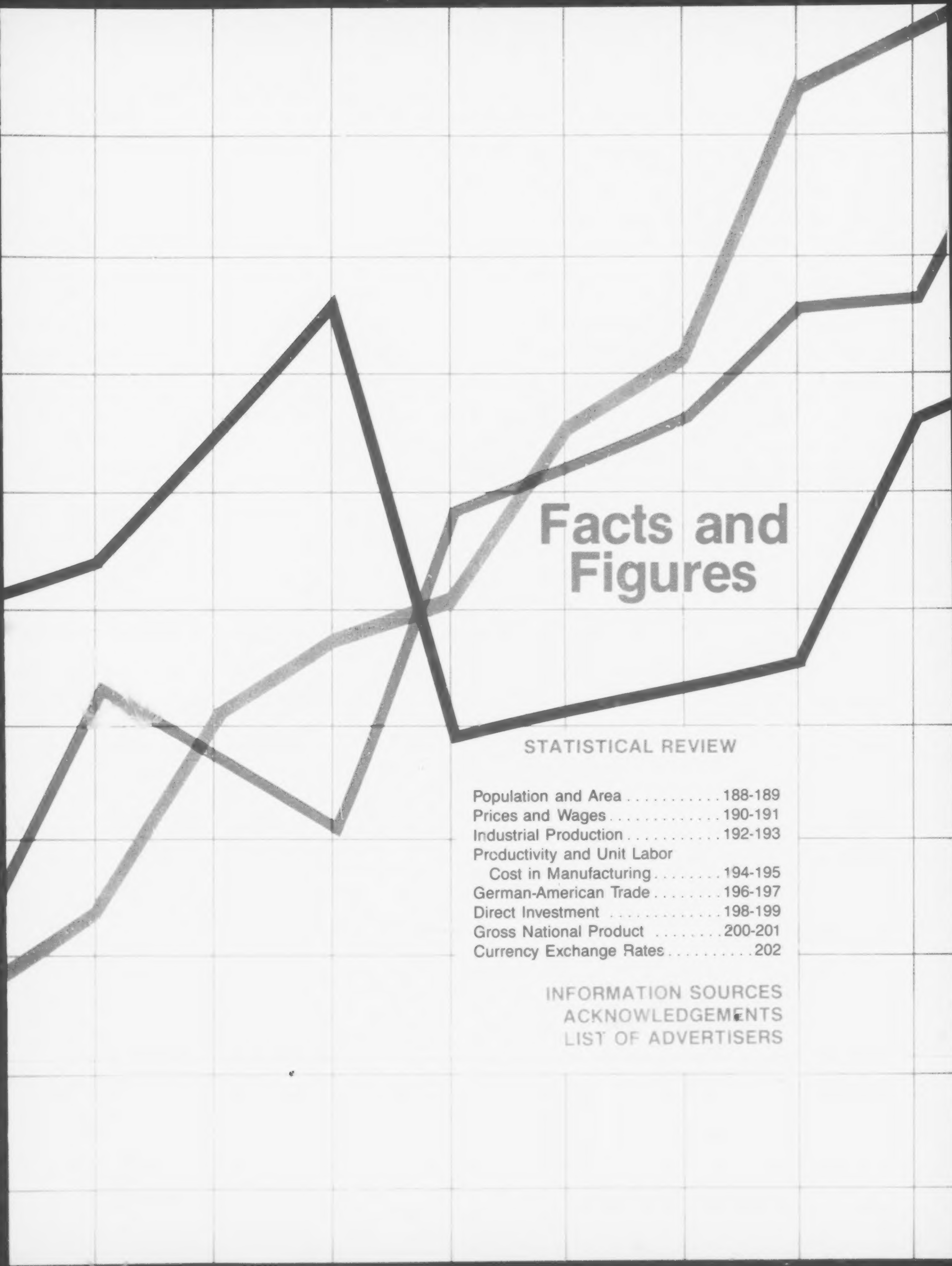


Facts and Figures

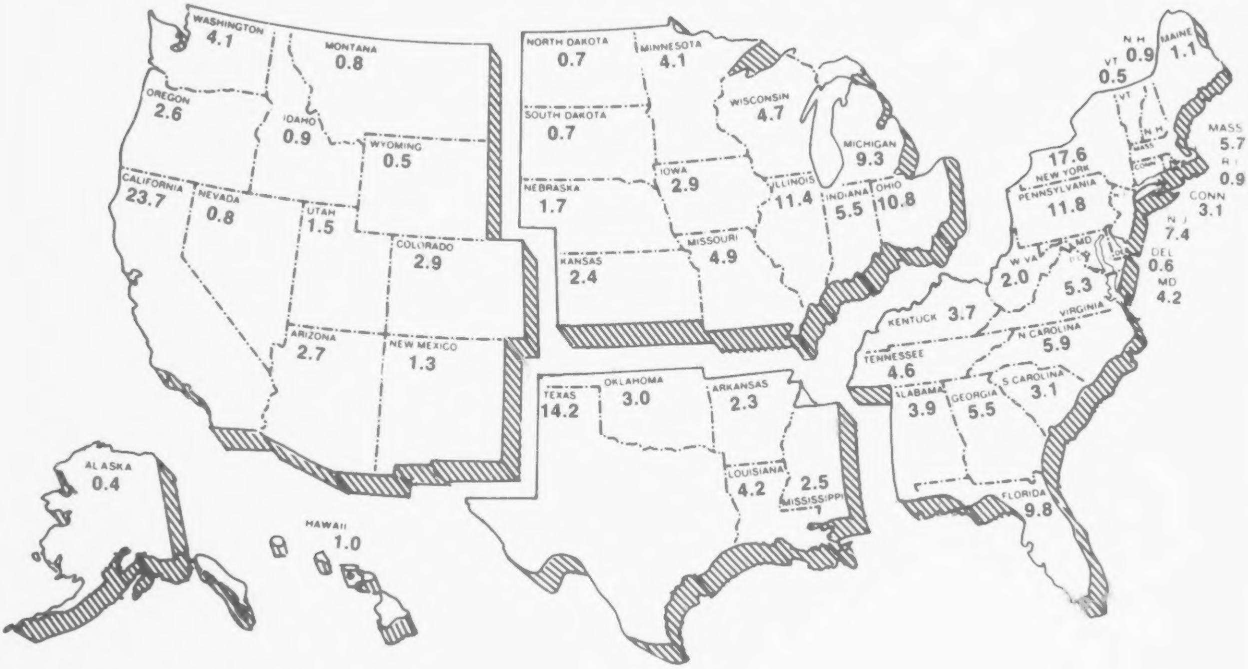
STATISTICAL REVIEW

Population and Area 188-189
Prices and Wages 190-191
Industrial Production 192-193
Productivity and Unit Labor
Cost in Manufacturing 194-195
German-American Trade 196-197
Direct Investment 198-199
Gross National Product 200-201
Currency Exchange Rates 202

INFORMATION SOURCES
ACKNOWLEDGEMENTS
LIST OF ADVERTISERS

Statistical Review

U.S.A.



POPULATION AND AREA

Population Break (in mil.)	1960	1970	1975	1979	1980	1981	1982	1983
Area (in 1000 sq. miles)	3.618.5							
Population (in mil.)	180.7	204.9	218.6	220.6	226.5*	227.9	231.5	234.2
—male	89.3	100.3	104.2	107.5	110.0	110.5	113.3	—
—female	91.4	104.6	109.3	113.1	116.5	117.4	118.2	—
Households (in mil.)	58.2	63.4	71.1	77.3	79.1	79.3	79.8	—

Source: U.S. Department of Commerce

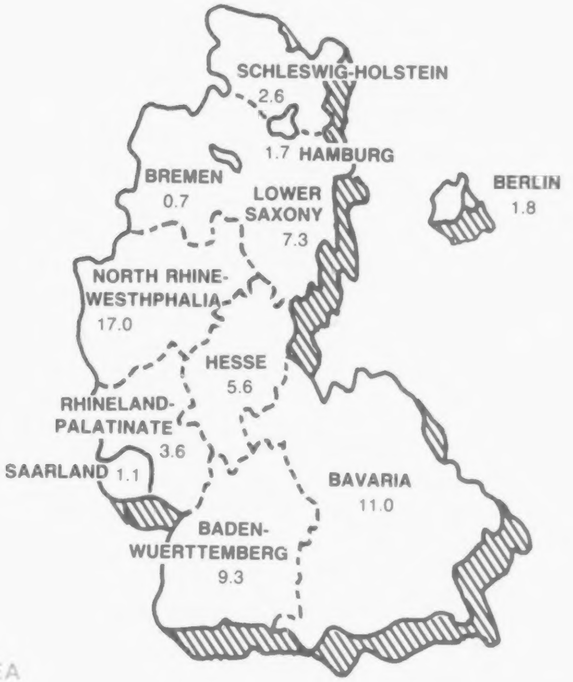
**Based on new benchmark levels. Not comparable with previously published data.*

Labor Market (in 1000)

Period	**Civilian Labor Force**	**Employed**	**Unemployed**	**%**
1960	69,628	65,778	3,852	5.5
1970	82,715	78,627	4,088	4.9
1972	86,542	81,702	4,840	5.6
1973	88,714	84,409	4,304	4.9
1974	91,011	85,936	5,076	5.6
1975	92,613	84,783	7,830	8.5
1976	94,773	87,485	7,288	7.7
1977	97,401	90,546	6,855	7.0
1978	100.420	94,373	6,047	6.0
1979	102,908	96,945	5,963	5.8
1980	104,719	97,270	7,448	7.1
1981	108,670	100,397	8,273	7.6
1982	110,204	99,526	10,678	9.7
1983	111,551	100,834	10,717	9.6
Sept. 1984	114,174	105,792	8,382	7.4

Source: Department of Commerce
Current Business Statistics

GERMANY



POPULATION AND AREA

Population Break (in mil.)

	1960	1970	1975	1979	1980	1981	1982	1983
Area (in 1000 sq. miles)	96.0							
Population (in mil.)	55.4	60.7	61.8	61.4	61.7	61.7	61.6	61.4
—male	26.0	28.9	29.4	29.3	29.5	29.6	29.5	29.4
—female	29.4	31.8	32.3	32.1	32.2	32.2	31.1	32.0
Households (in mil.)	19.3	22.0	23.7	24.5	24.8	25.1	25.3	25.3

Source: Statistisches Bundesamt, Germany

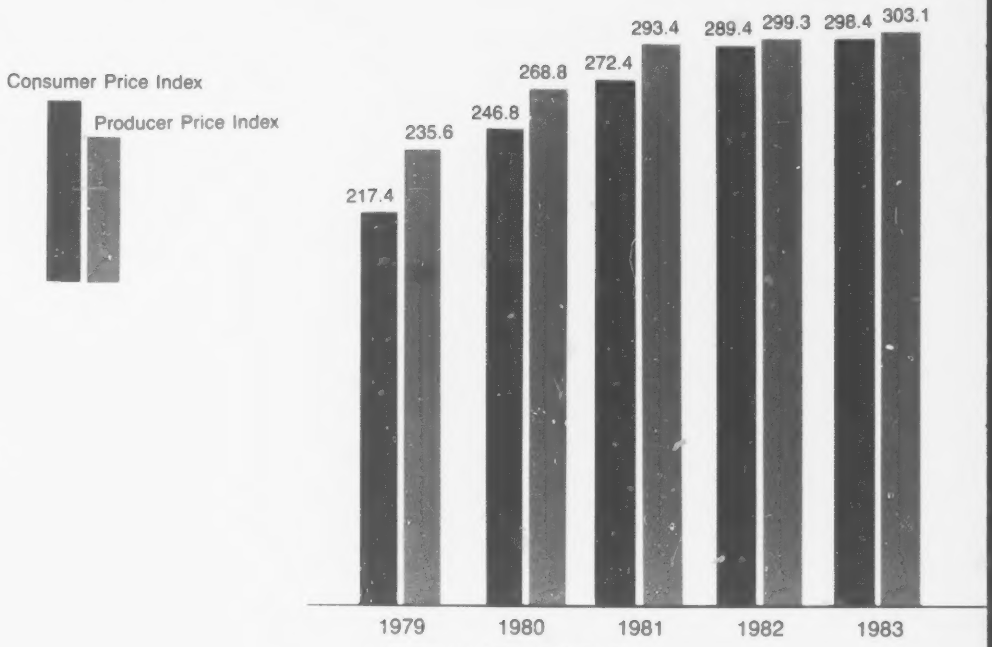
Labor Market (in 1000)

Period	Civilian Labor Force	Employed	Unemployed	%
1960	26,518	26,247	271	1.3
1970	26,817	26,668	149	0.7
1972	26,901	26,655	246	1.1
1973	26,985	26,712	273	1.3
1974	26,797	26,215	582	2.6
1975	26,397	25,323	1,074	4.7
1976	26,136	25,088	1,060	4.6
1977	26,074	25,044	1,030	4.5
1978	26,223	25,230	993	4.3
1979	26,449	25,573	876	3.8
1980	26,684	25,795	889	3.8
1981	26,927	25,655	1,272	5.5
1982	27,393	25,560	1,833	6.8
1983	27,445	25,187	2,258	7.5
1984	27,324	24,976	2,348	9.1

Source: Statistisches Bundesamt, Germany

U.S.A.

PRICES AND WAGES



Wages and inflation (1967 = 100)

Source: U.S. Department of Labor

Consumer Price Index

Period		1967 =100	Change from previous year %
1960	average	88.7	+ 1.6
1970	"	116.3	+ 5.9
1976	"	170.5	+ 5.8
1977	"	181.5	+ 6.5
1978	"	195.4	+ 7.7
1979	"	217.4	+11.3
1980	"	246.8	+13.5
1981	"	272.4	+10.4
1982	"	289.4	+ 6.1
1983	"	298.4	+ 3.2

Source: U.S. Department of Labor

Producer Price Index

Period		1967 =100	Change from previous year %
1960	average	94.9	+ 0.1
1970	"	110.4	+ 3.7
1976	"	183.0	+ 4.6
1977	"	194.2	+ 6.1
1978	"	209.3	+ 7.8
1979	"	235.6	+12.6
1980	"	268.8	+13.8
1981	"	293.4	+ 9.2
1982	"	299.3	+ 2.0
1983	"	303.1	+ 1.3

Source: U.S. Department of Labor

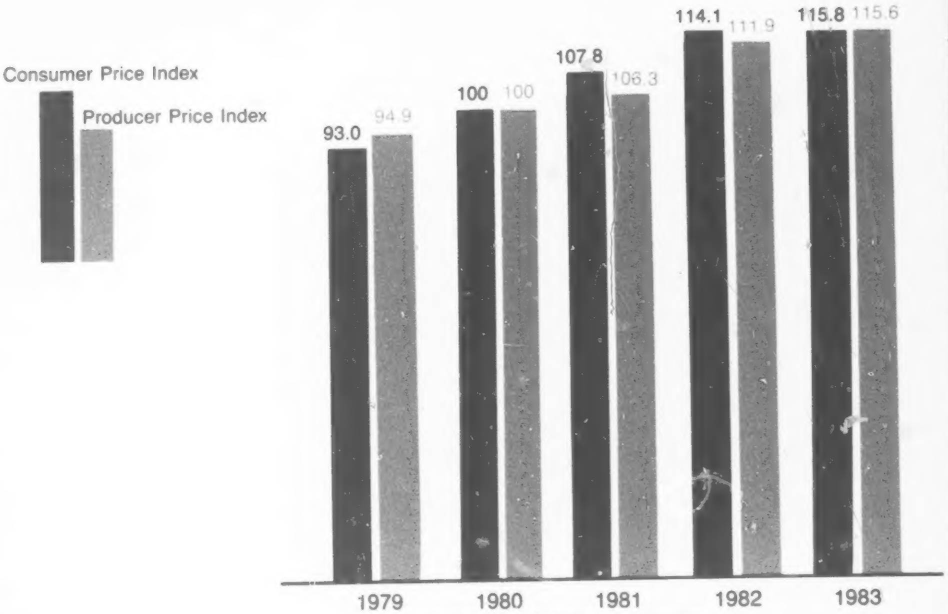
U.S.A. Gross Hourly Earnings (in $)
— average —
Manufacturing Industry

1981	7.99
1982	8.49
1983	8.83
July 1984	8.82

Source: Department of Commerce

GERMANY

PRICES AND WAGES



Wages and inflation (1980 = 100)

Source: Statistisches Bundesamt, Germany

Consumer Price Index

Period		1980 = 100	Change from previous year %
1974	average	78.7	+13.4
1975	"	82.3	+ 4.6
1976	"	85.4	+ 3.8
1977	"	87.7	+ 2.7
1978	"	88.7	+ 1.1
1979	"	93.0	+ 4.8
1980	"	100	+ 7.5
1981	"	107.8	+ 7.8
1982	"	114.1	+ 5.8
1983	"	115.8	+ 1.5
1983	Aug.	116.3	+ 1.3
	Sept.	116.6	+ 1.5
	Oct.	116.7	+ 1.2
	Nov.	116.9	+ 1.4
	Dec.	117.1	+ 1.7
1984	Jan.	117.8	+ 2.3
	Feb.	118.0	+ 2.6
	March	118.2	+ 3.1
	April	118.7	+ 3.1
	May	118.9	+ 3.2
	June	119.0	+ 3.0
	July	119.3	+ 3.2
	Aug.	119.3	+ 2.6

Source: Deutsche Bundesbank

Producer Price Index

Period		1980 = 100	Change from previous year %
1974	average	77.4	+ 6.9
1975	"	82.0	+ 5.9
1976	"	85.6	+ 4.4
1977	"	88.7	+ 3.6
1978	"	91.1	+ 2.7
1979	"	94.9	+ 4.2
1980	"	100	+ 5.4
1981	"	106.3	+ 6.3
1982	"	111.9	+ 5.3
1983	"	115.6	+ 3.3
1983	Aug.	116.2	+ 3.3
	Sept.	116.5	+ 3.3
	Oct.	116.5	+ 2.7
	Nov.	116.7	+ 2.6
	Dec.	117.0	+ 2.6
1984	Jan.	117.5	+ 2.7
	Feb.	117.8	+ 2.9
	March	117.9	+ 3.1
	April	118.1	+ 3.0
	May	118.2	+ 2.8
	June	118.6	+ 2.8
	July	118.4	+ 2.2
	Aug.	118.2	+ 1.7

Source: Deutsche Bundesbank

Germany Gross Hourly Earnings (in DM)
—average—
Manufacturing Industry

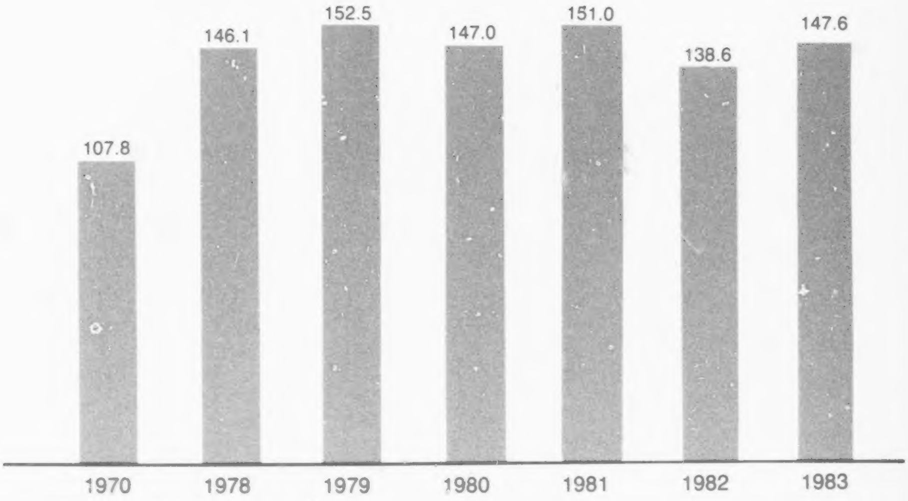
1981	14.19
1982	14.89
1983	15.41
July 1984	15.89

Source: Statistisches Bundesamt

U.S.A.

INDUSTRIAL PRODUCTION

Index of Industrial Production:
1967 = 100



Source: U.S. Department of Commerce

Percentage change from preceding year and quarter

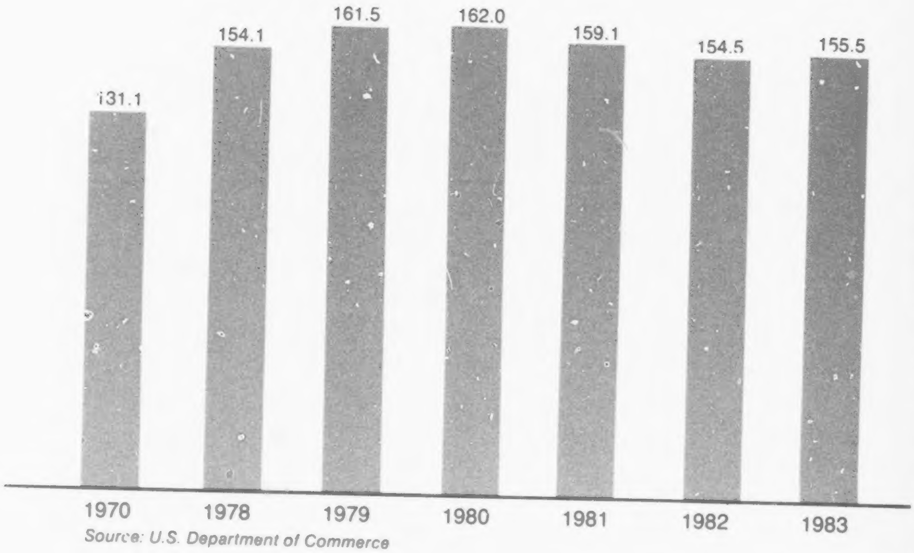
1979	4.4
1980	-3.6
1981	2.7
1982	-8.2
1983	6.5
1982: III	-0.9
IV	-2.1
1983: I	2.4
II	4.3
III	5.1
IV	2.5
1984: I	2.7
II	1.9

Source: United States Department of Commerce

GERMANY

INDUSTRIAL PRODUCTION

Index of Industrial Production:
1967 = 100



Source: U.S. Department of Commerce

Percentage change from preceding year and quarter

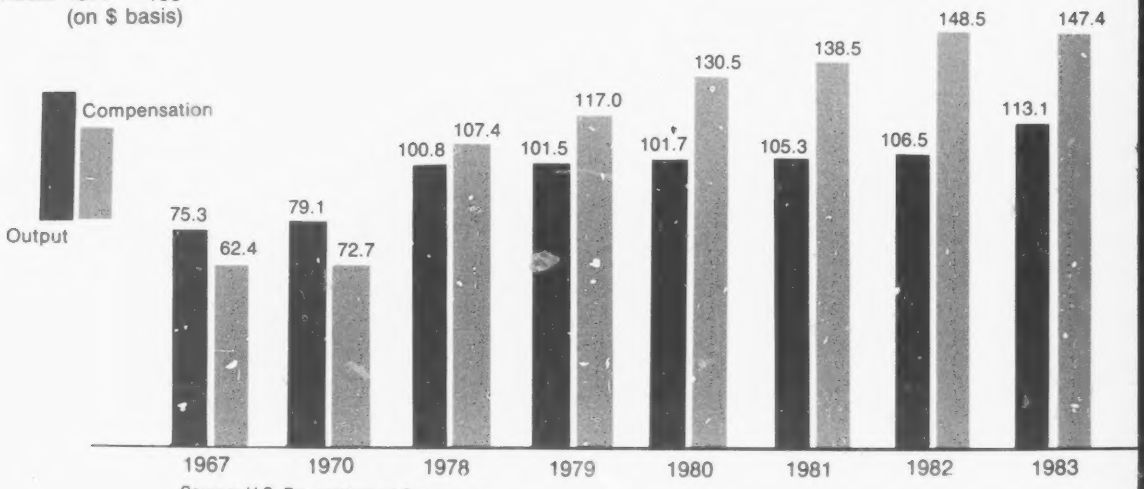
1979	4.8
1980	0.3
1981	-1.8
1982	-2.9
1983	0.6
1982: III	-3.1
IV	-1.4
1983: I	1.6
II	2.0
III	-0.1
IV	2.8
1984: I	1.1
II	-2.4

Source: United States Department of Commerce

U.S.A.

PRODUCTIVITY AND UNIT LABOR COST IN MANUFACTURING

Output and Compensation per Hour
Index: 1977 = 100
(on $ basis)



Source: U.S. Department of Commerce

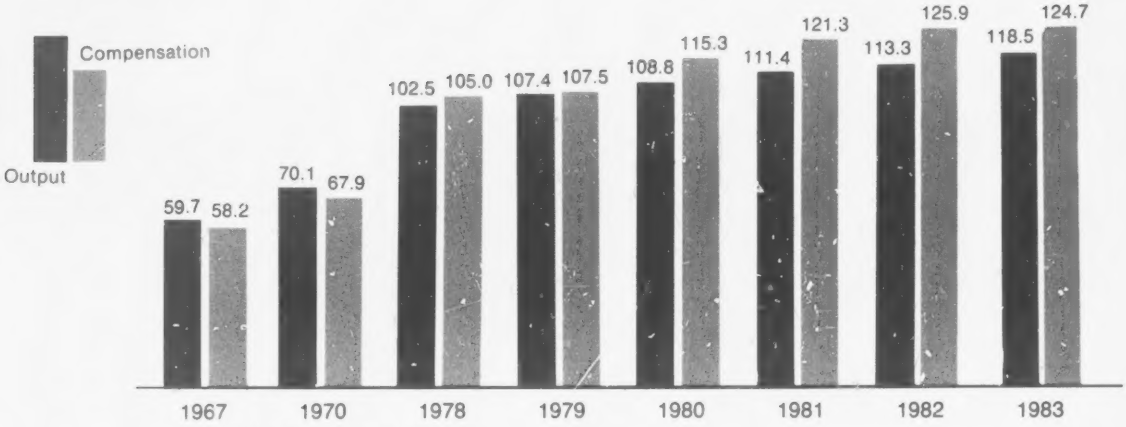
Period	Unit Labor Cost	Output per Man-Hour	Hourly Compensation
1967	62.4	75.3	47.0
1970	72.7	79.1	57.6
1978	107.4	100.8	108.3
1979	117.0	101.5	118.8
1980	130.5	101.7	132.7
1981	138.5	105.3	145.8
1982	148.5	106.5	158.2
1983	147.4	113.1	166.7

Source: U.S. Department of Commerce

GERMANY

PRODUCTIVITY AND UNIT LABOR COST IN MANUFACTURING

Output and Compensation per Hour
Index: 1977 = 100
(on DM basis)

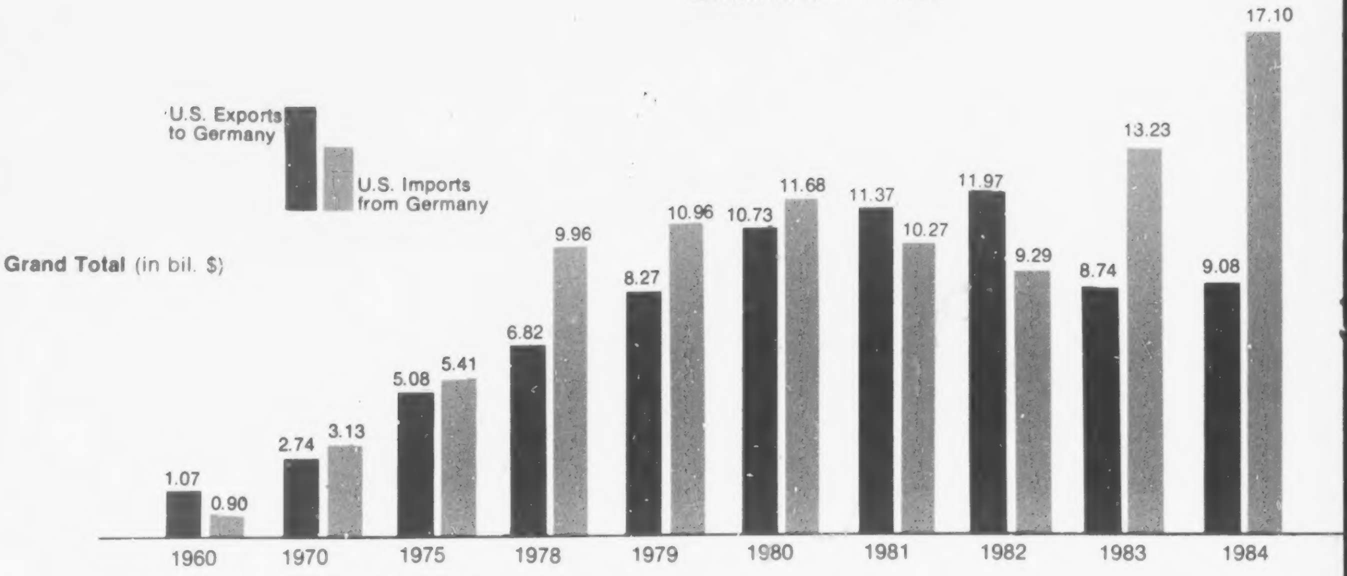


Source: U.S. Department of Commerce

Period	Unit Labor Cost	Output per Man-Hour	Hourly Compensation
1967	58.2	59.7	34.8
1970	67.9	70.1	47.6
1978	105.0	102.5	107.7
1979	107.5	107.4	115.4
1980	115.3	108.8	125.5
1981	121.3	111.4	135.1
1982	125.9	113.3	142.6
1983	124.7	118.5	147.7

Source: U.S. Department of Commerce

GERMAN-U.S. TRADE



Source: U.S. Department of Commerce

Major Items of U.S.–German Trade

U.S. Exports to Germany				U.S. Imports from Germany		
1980	1982	1983		1980	1982	1983
951.1	568.6	776.6	Food and live animals	168.8	156.9	206.2
31.2	17.1	10.6	Meat and prep.	2.5	1.6	2.5
6.4	5.4	1.8	Dairy products and eggs	16.0	26.2	33.6
19.8	9.8	13.5	Fish and prep.	1.5	2.1	4.7
223.8	120.4	73.3	Cereals and prep.	6.7	9.2	16.5
291.3	149.9	125.9	Fruits and vegetables	34.3	42.1	62.5
361.6	148.6	533.5	Animal feeding-stuffs	6.6	6.2	
3.1	1.6	–	Coffee, cocoa, spices and prep.	69.3	40.7	26.3
246.0	208.8	186.5	Beverages and tobacco	145.5	182.0	208.2
–	–	–	Beer	43.4	71.3	–
2.0	2.2	–	Wine	97.3	101.8	–
9.7	10.6	–	Alcoholic beverages, distilled	2.1	4.7	–
234.1	198.1	172.4	Tobacco, raw and manufactured	2.1	0.8	1.9
1,500.3	1,358.5	1,134.9	Crude materials, inedible, exc. fuel	130.1	85.3	95.9
102.9	65.6	12.7	Hides, skins and furskins undressed	3.4	2.1	0.4
398.5	507.4	422.6	Soybeans	–	–	–
66.9	49.9	51.6	Rubber, incl. synthetic and reclaimed	3.3	5.6	–
134.6	83.2	151.1	Wood, lumber and cork	0.5	0.8	0.9
202.9	206.8	218.9	Pulps and waste paper	–	–	–
101.6	56.8	114.7	Raw textile fibers and their waste	11.7	5.8	15.3
84.7	77.8	–	Crude fertilizers and minerals	8.6	12.1	15.5
330.3	210.7	85.1	Metalliferous ores and metal scrap	88.5	43.6	31.2
112.3	42.7	83.9	Nonferrous metal scrap	64.9	22.7	12.3
18.4	18.6	–	Vegetable materials, crude	1.8	3.2	2.7
216.4	217.1	113.2	Mineral fuels and lubricants	26.3	98.8	93.6
136.5	137.9	82.9	Coal, coke and briquets	4.4	–	–
79.7	79.2	30.1	Petroleum and petroleum products	21.9	98.8	93.6

Continued

Major Items of U.S.—German Trade (in mil.$) (continued)

U.S. Exports to Germany				**U.S. Imports from Germany**		
1980	1982	1983		1980	1982	1983
35.8	27.5	24.1	Oils and fats, animal and vegetable	2.5	1.6	2.7
35.0	23.8	23.6	Animal oils and fats	0.2	0.5	—
0.7	3.7	0.5	Vegetable oils and fats	1.1	1.1	—
850.8	1,240.7	902.0	Chemicals	1,019.2	1,112.5	1,255.0
396.8	522.4	484.5	Organic and inorganic chemicals	512.0	564.2	660.4
25.9	27.3	30.0	Essent. oils, perfume materials, soaps	27.6	28.1	32.4
23.4	17.6	22.7	Dyeing, tanning and coloring materials	97.2	95.4	—
200.5	332.7	—	Radioactive materials	0.2	1.2	—
133.1	141.4	159.0	Medicinal and pharmaceutical products	92.1	83.7	—
142.9	80.1	109.9	Synthetic resins and plastic materials	149.4	127.5	—
79.1	99.2	—	Other chemical products	126.7	224.6	—
990.9	573.5	517.9	Manufactured goods by chief material	1,493.0	2,093.1	1,675.5
24.6	16.4	19.7	Leather	18.4	19.9	19.8
9.8	9.8	9.0	Tires and tubes for tires	82.9	60.6	56.7
127.8	76.8	66.0	Textile yarn and fabrics	90.7	95.3	119.2
77.1	56.5	—	Wood and cork	6.8	7.9	—
142.9	98.4	86.0	Paper and paperboard	21.0	44.6	78.9
47.2	21.2	17.7	Iron and steel	557.1	1164.8	553.6
295.7	84.7	—	Nonferrous metals	202.4	225.2	290.6
180.7	142.6	117.3	Metal manufactures	284.1	245.8	271.4
49.0	40.6	64.0	Glass, Glassware, Pottery	151.3	148.3	166.6
3,916.4	3,908.8	3,573.9	Machinery and transport equipment:	7,562.9	7,037.9	7,776.8
2,147.4	3,331.9	2,875.1	Machines, exc. electrical	2,956.6	3,764.7	—
987.0	576.9	698.7	Electrical machines and apparatus	644.7	555.5	715.2
782.0	1,007.2	—	Transport equipment	3,961.6	3,725.5	4,102.4
74.2	68.3	63.4	—Metalworking machinery	334.2	324.7	232.4
1,083.4	46.5	493.8	—Office machines	195.1	201.1	272.1
50.7	31.0	45.0	—Agricultural machines	199.4	202.3	211.2
42.0	32.1	27.4	—Textile and leather machinery	249.2	235.3	325.7
291.5	331.4	124.6	—Other machs. for spec. industries	679.1	1,125.1	1,279.0
374.6	371.1	309.5	—Other machinery	689.3	801.2	—
212.8	214.3	193.6	—Telecommunications apparatus	84.4	68.7	67.5
97.2	95.4	—	—El. medical and radiolog. apparatus	113.9	163.6	—
230.3	260.2	228.5	—Road motor vehicles and parts	3,889.0	3,640.8	3,566.3
533.0	778.3	444.6	—Aircraft and spacecraft and parts	48.8	50.4	99.2
1,631.0	955.3	868.6	Miscellaneous manufactured articles:	890.6	904.1	1051.1
72.0	42.1	35.6	Clothing and accessories	22.9	26.4	40.1
4.5	1.9	—	Footwear	16.2	12.2	16.6
482.6	513.8	414.1	Prof., scientific and controlling instruments	277.4	278.4	288.3
210.6	119.9	357.5	Photo and motion picture supplies	52.7	172.8	—
3.4	3.9	3.2	Watches and clocks	52.0	43.1	40.6
68.1	85.4	99.7	Sound recorders, musical instruments	38.5	69.5	—
26.0	28.0	31.1	Printed matter	36.9	36.3	42.9
52.3	67.2	48.1	Rubber and plastic manufactures	116.1	121.4	—
116.1	59.5	65.9	Toys, sporting goods, baby carriages	38.6	36.7	—
511.9	19.0	—	Artworks, collectors pieces, antiques	61.3	36.0	65.6
14.6	10.0	—	Jewelry	22.5	25.9	—
256.5	233.7	—	Items not classified by kind	242.3	239.7	330.,2

Source: U.S. Department of Commerce
**Statistisches Bundesamt, Germany*

U.S.A.

DIRECT INVESTMENT

U.S. Direct Investment Abroad (in million $)

By Country	1970	1978	1979	1980	1981	1982	1983
United Kingdom[2]	1,310	5,202	5,892	7,979	10,348	4,611	3,656
Japan	355	2,371	2,898	2,385	4,894	4,540	3,612
Germany	873	3,605	4,440	4,083	4,470	3,584	2,908
Canada[1]	301	1,885	2,134	2,694	4,921	-162	2,049
Italy[1]	109	168	544	744	1,383	960	2,205
France	374	1,891	1,983	3,099	4,583	2,844	1,760
Netherlands[1]	551	1,755	2,402	3,258	3,194	2,228	1,529

[1] *Excludes reinvested earnings.*

[2] *Excludes oil companies' investment abroad*

Source: U.S. Department of Commerce/International Economic Indicators

Foreign Direct Investment in the U.S.A. (in million $)

By Country	1970	1978	1979	1980	1981	1982	1983
United Kingdom[2]	871	2,420	3,804	5,986	1,829	2,008	4,769
France	622	2,454	2,588	3,290	2,457	1,596	1,795
Italy[1]	606	510	360	584	1,130	643	1,229
Germany	595	1,558	1,650	239	1,215	1,264	1,130
Netherlands	648	532	1,396	1,904	1,287	670	536
Japan	94	8	239	278	189	439	416
Canada[1]	864	75	576	500	-3,837	-1,155	162

[1] *Excludes reinvested earnings.*

[2] *Excludes overseas oil companies in the United Kingdom*

Source: U.S. Department of Commerce/International Economic indicators

GERMANY

DIRECT INVESTMENT

German Direct Investment Abroad (in million DM)
(annual rates)

By country	1976	1977	1978	1979	1980	1981	1982	1983
United States	1,138.4	1,338.8	1,885.8	3,692.6	3,380.1	3,402.8	3,274.5	2,748.8
Belgium/Luxemburg	507.7	478.4	573.3	498.9	1,028.1	1,020.5	749.4	621.7
France	367.1	413.4	543.3	721.9	453.7	621.6	304.4	383.2
Brazil	576.5	587.8	424.3	532.9	362.7	731.0	603.2	528.6
Switzerland	317.3	181.6	391.0	136.8	542.9	367.0	307.4	614.1
Canada	316.9	371.0	407.7	407.5	421.5	479.0	382.3	-14.2
United Kingdom	255.3	150.6	242.7	85.7	171.0	295.0	1,050.9	1,058.0
Spain	40.3	71.9	244.5	188.1	228.2	91.0	304.4	448.4
Netherlands	323.9	222.1	287.6	550.6	254.8	60.7	556.1	-836.2
Italy	87.6	75.6	97.2	150.7	212.8	164.4	269.3	162.1
By industry	1976	1977	1978	1979	1980	1981	1982	1983
Chemicals	786.7	587.5	667.4	425.0	751.2	1,177.6	548.8	906.2
Finance	473.8	594.6	673.4	678.0	968.2	1,884,7	905.3	1,730.6
Electrical engineering	529.9	670.5	312.0	855.6	605.0	477.6	939.2	648.7
Motor vehicles	101.5	438.6	368.7	510.2	897.9	1,339.1	1,004.6	1,368.6
Mechanical engineering	656.8	272.8	438.9	546.4	807.8	556.6	850.7	1,048.6
Iron & Steel	449.3	301.3	718.3	864.2	224.0	-8.9	663.9	-671.6
Petroleum	460.1	344.6	263.4	261.9	301.9	544.2	786.3	400.8
Insurance	171.2	206.8	212.9	959.6	233.7	156.2	671.0	247.9
Real estate	125.2	100.3	113.0	219.8	151.1	235.7	141.7	65.1
Medical and pharmaceutical products	96.6	75.9	40.9	200.6	84.5	368.6	206.8	211.7

Source: Deutsche Bundesbank

Foreign Direct Investment in Germany (in million DM)
(annual rates)

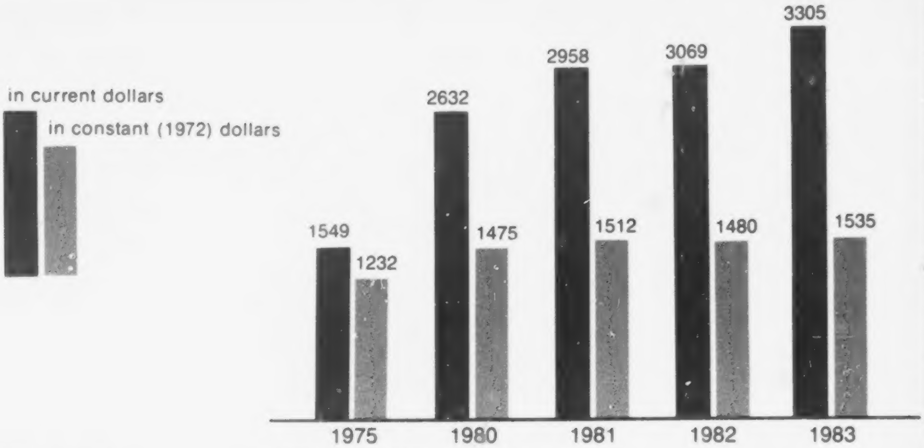
By country	1976	1977	1978	1979	1980	1981	1982	1983
United States	758.6	1,155.9	874.0	216.4	172.2	405.5	1,220.9	1,236.2
Switzerland	609.6	700.8	375.9	256.8	88.5	670.2	489.8	901.8
United Kingdom	148.7	361.9	721.3	363.0	908.8	848.4	663.9	223.3
Netherlands	572.5	467.8	-8.4	358.2	574.0	725.7	306.7	-753.9
France	245.2	305.6	274.7	86.9	175.1	281.3	429.7	352.7
Belgium/Luxemburg	104.2	245.1	312.7	225.7	36.1	214.0	200.9	124.3
Japan	208.5	135.0	94.3	89.2	155.3	206.2	262.0	263.4
Sweden	139.7	34.3	152.5	53.9	104.7	87.2	1.9	272.0
Iran	13.2	104.0	983.5	10.4	-0.2	-3.4	2.0	
Canada	16.3	28.8	-7.7	12.7	19.8	110.1	13.7	36.3
By industry	1976	1977	1978	1979	1980	1981	1982	1983
Holding companies	328.1	278.7	1,355.6	300.1	15.2	450.6	1,541.5	416.2
Petroleum	36.6	374.5	307.3	-258.5	298.4	228.6	373.6	-139.5
Finance	532.9	1,103.1	222.9	321.9	603.0	712.4	535.9	178.1
Chemicals	263.8	157.5	349.3	345.0	950.9	476.0	-118.0	434.1
Electrical engineering	291.8	332.4	245.8	469.9	31.1	469.7	290.0	452.9
Mechanical engineering	301.6	323.8	158.5	77.0	213.6	422.4	456.8	408.8
Motor vehicles	301.0	144.4	-33.7	-101.9	26.3	361.3	72.2	501.8
Food	20.2	-80.4	-8.1	259.1	-222.4	-101.7	6.9	207.3
Nonferrous metals	62.6	39.7	35.1	5.3	80.2	173.0	6.5	583.6
Iron & Steel	51.2	103.8	216.9	139.4	-29.3	112.4	-275.8	-1,188.7

Source: Deutsche Bundesbank

U.S.A.

GROSS NATIONAL PRODUCT
(in billion $)

GNP Total



Source: U.S. Department of Commerce

GNP by Type of Expenditure (at current prices)

Period	Gross National Product	% chg. from yr. earlier	Personal Consumption	Government Consumption	Gross Private Domestic Investment	Net Exports of Goods and Services
1972	1,185.9	10.1	737.1	253.1	195.0	0.7
1973	1,326.4	11.8	812.0	270.4	229.8	14.2
1974	1,434.2	8.1	888.1	304.1	228.7	13.4
1975	1,549.2	8.0	976.4	339.9	206.1	26.8
1976	1,718.0	10.9	1,084.3	362.1	257.9	13.8
1977	1,918.3	11.7	1,204.4	393.8	324.1	-4.0
1978	2,163.9	12.8	1,346.5	431.9	386.6	-1.1
1979	2,417.8	11.7	1,507.2	474.4	423.0	13.2
1980	2,631.7	8.8	1,668.1	537.8	401.9	23.9
1981	2,957.8	12.4	1,849.1	596.5	484.2	28.0
1982	3,069.3	3.8	1,984.9	650.5	414.9	19.0
1983	3,304.8	7.7	2,155.9	685.5	471.6	-8.3
1982: I	3,026.0	-.2	1,931.3	630.9	436.2	27.7
II	3,061.2	4.7	1,960.9	633.7	431.2	35.5
III	3,080.1	2.5	2,001.3	656.3	415.9	6.6
IV	3,109.6	3.9	2,046.1	681.0	376.2	6.3
1983: I	3,173.8	8.5	2,070.4	678.8	405.0	19.6
II	3,267.0	12.3	2,141.6	682.2	449.6	-6.5
III	3,346.6	10.1	2,181.4	689.8	491.9	-16.4
IV	3,431.7	10.6	2,230.2	691.4	540.0	-29.8
1984: I	3,553.3	14.9	2,276.5	704.4	623.8	-51.5
II	3,644.7	10.7	2,332.7	743.7	627.0	-58.7
III*	3,703.6	6.6	—	—	—	—

Source: Department of Commerce
**Estimate*

GNP by Type of Expenditure (at constant 1972 prices)

Period	Gross National Product	% chg. from yr. earlier	Personal Consumption	Government Consumption	Gross private domestic investment: Nonresidential fixed	Gross private domestic investment: Residential fixed	Gross private domestic investment: Change in business inventories	Net Exports of Goods and Services
1972	1,185.9	5.7	737.1	253.1	121.0	63.8	10.2	0.7
1973	1,254.3	5.8	767.9	253.3	138.1	62.3	17.2	15.5
1974	1,246.3	-.6	762.8	260.3	135.7	48.2	11.6	27.8
1975	1,231.6	-1.2	779.4	265.2	119.3	42.2	-6.7	32.2
1976	1,298.2	5.4	823.1	265.2	125.6	51.2	7.8	25.4
1977	1,369.7	5.5	864.3	269.2	140.3	60.7	13.3	22.0
1978	1,438.6	5.0	903.2	274.6	158.3	62.4	16.0	24.0
1979	1,479.4	2.8	927.6	278.3	169.9	59.1	7.3	37.2
1980	1,475.0	-.3	931.8	284.3	165.8	47.1	-4.4	50.3
1981	1,512.2	2.5	950.5	287.0	175.0	44.5	11.3	43.8
1982	1,480.0	-2.1	963.3	292.7	166.9	37.9	-10.4	29.7
1983	1,534.7	3.7	1,009.2	291.9	171.0	53.7	-3.6	12.6
1982: I	1,483.5	-4.6	953.7	290.2	175.2	36.2	-6.7	34.9
II	1,480.5	-.8	958.9	287.0	166.9	37.5	-4.0	34.1
III	1,477.1	-.9	964.2	292.8	163.9	36.8	-6.4	25.7
IV	1,478.8	.5	976.3	300.6	161.5	40.8	-24.6	24.1
1983: I	1,491.0	3.3	982.5	294.3	161.6	46.2	-16.5	22.9
II	1,524.8	9.4	1,006.2	292.4	165.3	53.4	-6.1	13.6
III	1,550.2	6.8	1,015.6	292.0	172.6	57.2	.9	11.9
IV	1,572.7	5.9	1,032.4	288.8	184.5	57.8	7.2	2.0
1984: I	1,610.9	10.1	1,044.1	289.5	193.3	60.6	31.6	-8.3
II	1,638.8	7.1	1,064.2	302.1	202.9	60.8	20.3	-11.4
III*	1,653.4	3.6	—	—	—	—	—	—

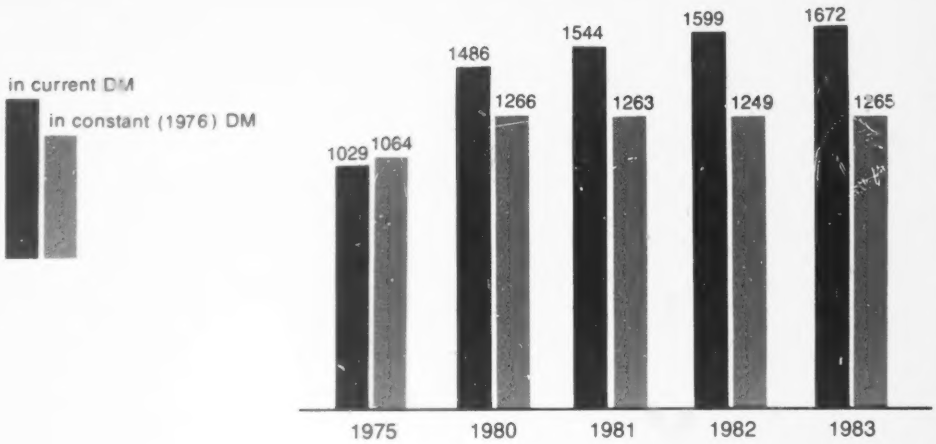
Source: Department of Commerce
**Estimate*

GERMANY

GROSS NATIONAL PRODUCT

(in billion DM)

GNP Total



GNP by Type of Expenditure in DM

(at current prices)

Period	Gross National Product	% chg. from yr. earlier	Personal Consumption	Government Consumption	Gross Private Domestic Investment	Net Exports of Goods and Services
1960	303.0	11.7	171.8	40.7	82.5	7.9
1970	675.7	13.6	367.5	108.1	189.1	14.2
1972	827.2	9.4	447.7	144.0	216.9	18.5
1973	920.1	11.2	491.7	166.7	232.6	29.1
1974	986.9	7.3	527.5	194.0	221.9	43.4
1975	1,028.9	4.4	576.5	215.3	214.5	29.8
1976	1,125.0	8.7	623.6	227.2	231.9	28.6
1977	1,200.6	6.7	669.6	239.4	249.0	29.5
1978	1,290.7	7.5	713.9	257.1	273.0	37.2
1979	1,400.4	8.5	766.4	278.6	314.4	12.4
1980	1,486.0	6.4	819.5	303.4	351.0	-2.4
1981	1,545.1	4.0	879.2	317.8	333.3	14.7
1982	1,599.1	3.5	910.3	325.3	325.3	38.1
1983	1,671.6	4.5	947.2	334.2	351.4	38.7
1983 1.Hj	792.4	3.8	458.8	154.5	158.5	20.6
2.Hj	879.2	5.2	488.5	179.6	192.9	18.2
1984 1.Hj	825.7	4.2	475.5	159.7	175.5	15.0

Source: Statisches Bundesamt, Germany

GNP by Type of Expenditure

(at constant 1970 prices/1981-1984 at 1976 prices)

Period	Gross National Product	% chg. from yr. earlier	Personal Consumption	Government Consumption	Gross Private Domestic Investment	Net Exports of Goods and Services
1960	429.5	9.0	226.4	69.5	118.7	14.9
1970	679.0	5.9	367.5	108.1	189.1	14.2
1972	727.3	3.6	402.2	120.3	193.7	11.1
1973	763.0	4.9	412.5	126.8	197.8	25.9
1974	765.7	0.4	413.8	132.3	177.0	42.6
1975	751.5	-2.5	425.9	138.2	165.4	23.8
1976	792.0	5.3	441.0	141.0	173.2	26.6
1977	814.5	2.8	456.3	141.8	179.9	27.0
1978	843.5	3.6	474.4	147.8	189.1	25.7
1979	881.6	4.5	490.1	152.6	204.9	14.4
1980	897.5	1.8	497.5	156.3	212.6	14.4
1981	1,263.0	-0.2	708.1	251.3	257.2	46.4
1982	1,248.9	-1.1	698.2	248.7	244.7	57.3
1983	1,265.1	1.3	706.1	248.7	260.3	50.1
1983 1.Hj	609.0	0.4	345.5	121.9	116.3	25.4
2.Hj	656.0	2.2	360.6	126.7	143.9	24.7
1984 1.Hj	622.4	2.2	347.6	122.6	128.1	24.1

Source: Statisches Bundesamt, Germany

GERMANY/ U.S.A.

CURRENCY EXCHANGE RATES

Average Exchange Rates
(value of $1.00 in DM)

Annual Average

1975	DM 2.46
1976	2.52
1977	2.32
1978	2.01
1979	1.83
1980	1.82
1981	2.25
1982	2.43
1983	2.55
1984	2.82 (through November)

Source: Statistisches Bundesamt, Germany

Monthly Average

1982	Jan.	DM 2.2920
	Feb.	2.3665
	March	2.3791
	Apr.	2.3966
	May	2.3037
	June	2.4298
	July	2.4636
	Aug.	2.4781
	Sep.	2.5018
	Oct.	2.5300
	Nov.	2.5557
	Dec.	2.4185
1983	Jan.	DM 2.3884
	Feb.	2.4267
	March	2.4075
	Apr.	2.4387
	May	2.4662
	June	2.5475
	July	2.5876
	Aug.	2.6730
	Sep.	2.6681
	Oct.	2.6017
	Nov.	2.6833
	Dec.	2.7477
1984	Jan.	DM 2.8064
	Feb.	2.7050
	March	2.5961
	Apr.	2.6411
	May	2.7504
	June	2.7370
	July	2.8471
	Aug.	2.8871
	Sept.	3.0225
	Oct.	3.0685
	Nov.	2.9886

Source: Statistisches Bundesamt, Germany

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IMPORTANT GERMAN INDUSTRIAL INVESTORS IN THE USA

GERMAN FIRM	US AFFILIATE OR PARTICIPATION	PERCENT SHARE	REVENUE (millions $)
Bayer	Mobay Chemical	100	3,445
	Miles Laboratories	100	
	Helena Chemical	100	
	Haarmann & Reimer	100	
	Agfa-Gevaert	100	
	Compugraphic	79	
Volkswagenwerk	Volkswagen of America	100	3,492
	Royal Business Machines	100	
BASF	BASF Wyandotte	100	1,953
	Badische Corp.	100	
	BASF Systems	100	
	Fritzsche Dodge & Olcott	100	
	Knoll Pharmaceutical	100	
Hoechst	American Hoechst	100	1,625
Siemens	Siemens Components	100	1,355
	Siemens Corp.	100	
	Siecor	50	
	Siemens-Allis	88	
	Other Companies	100	
Thyssen	Budd Co.	100	1,215
Daimler-Benz	Freightliner	100	750
Henkel	Henkel Corp.	100	1,315
	Amchem Products	100	
	Clorox	23	
Tengelmann	Great A & P Tea	51	5,222
Flick	Grace	28	6,219
Haniel	Scrivner Inc.	100	1,172
Allianz	Allianz of America	100	651
	Munich Amer. Reins.	100	
	Munich Amer. Reass.	100	
Otto Versand	Spiegel Inc.	100	612

Source: Forbes, July 1984

Information Sources...

Government

Embassy of the Federal Republic of Germany
4645 Reservoir Road N.W.; Washington D.C., 20007.

German Information Center
410 Park Avenue, New York, N.Y., 10022.

Embassy of the United States of America
53 Bonn-Bad Godesberg; Mehlemer Aue.

Bundesminister fuer Wirtschaft
53 Bonn-Duisdorf; Willemomblerstr. 76 - Ministry of Economic Affairs.

Bundesminister der Finanzen
53 Bonn 1; Graurheindorferstr. 108 - Ministry of Finance (incl. Department for Customs & Duties).

Presse-und Informationsamt der Bundesregierung
53 Bonn 1; Welckerstr. 11 - Public Relations Department of the Federal Government.

Statistisches Bundesamt
62 Wiesbaden; Gustav Stresemann Ring 11 - Federal Department of Documentation and Statistics.

Deutsches Patentamt
8 Muenchen 22; Zweibrueckenstr. 12 - Commissioner of Patents.

Bundeskartellamt
1 Berlin 61; Mehringdamm 129 - Federal Antitrust Agency.

Deutsche Bundesbank
6 Frankfurt/Main 50; Wilhelm-Epstein-Strasse 14 - German Federal Reserve Bank.

Binational Institutions

German American Chamber of Commerce
Main Office: 666 Fifth Ave., New York, N.Y. 10103. Branches: 2 Houston Center, Houston, Texas 77010: Suite 2701, Peachtree Center, Harris Tower, 233 Peachtree Street NE, Atlanta, Ga. 30303; 1 Farragut Square South, Washington, D.C. 20006. Regional Chambers; 77 Monroe Street, Chicago, Ill. 60603; 465 California Street. Suite 1228, San Francisco, Calif. 94104; 3250 Wilshire Blvd., Los Angeles, Calif. 90016.

European Community Information Service
2100 M Street N.W.; Washington, D.C. 20037.

Public Authorities

Deutscher Normenausschuss
1 Berlin 30; Burggrafenstr. 4-7 - Determination Committee for Industrial Standards.

Bundesanstalt fuer Arbeit
85 Nuernberg; Regensburgerstr. 104 - Federal Employment Agency.

Industrial and Trade Associations

Bundesverband der Deutschen Industrie
5 Koeln 51; Oberlaenderufer 84-88 - Association of German Industries.

Bundesvereinigung der deutschen Arbeitgeberverbaende e.V.
5 Koeln 51; Oberlaenderufer 72 - Umbrella Association of employers' organizations; counterparts of the Umbrella Organization of Labor Unions.

Deutscher Industrie-und Handelstag
53 Bonn 1; Adenaueralle 148 - Association of German Chambers of Industry and Commerce.

DGB Deutscher Gewerkschaftsbund Bundesvorstand
4 Duesseldorf 30; Hans Boecklerstr. 39 - Umbrella Organization of Labor Unions.

Bundesverband des deutschen Gross-und Aussenhandels
53 Bonn; Kaiser - Friedrich Str. 13 - Umbrella Organization of exporters/importers and wholesalers.

Hauptgemeinschaft des deutschen Einzelhandels e.V.
5 Koeln 1; Sachsenring 89 - Retailer Association.

Centralvereinigung deutscher Handelsvertreter und Handelsmaklerverbaende
5 Koeln 41; Geleniusstr. 1 - Umbrella Association of brokers, agents and representatives.

Gesamtverband der deutschen Versicherungswirtschaft
5 Koeln 1; Ebertplatz 1 - Association of the Insurance Industry.

Zentralausschuss der Werbewirtschaft e.V.
53 Bonn - Bad Godesberg; Villichgasse 17 - Association of Advertising Agencies and Public Relations.

Ausstellungs- und Messeausschuss der deutschen Wirtschaft e.V.[AUMA]
5 Koeln 1; Lindestrasse 8 - Organization of Congresses and Trade Fairs.

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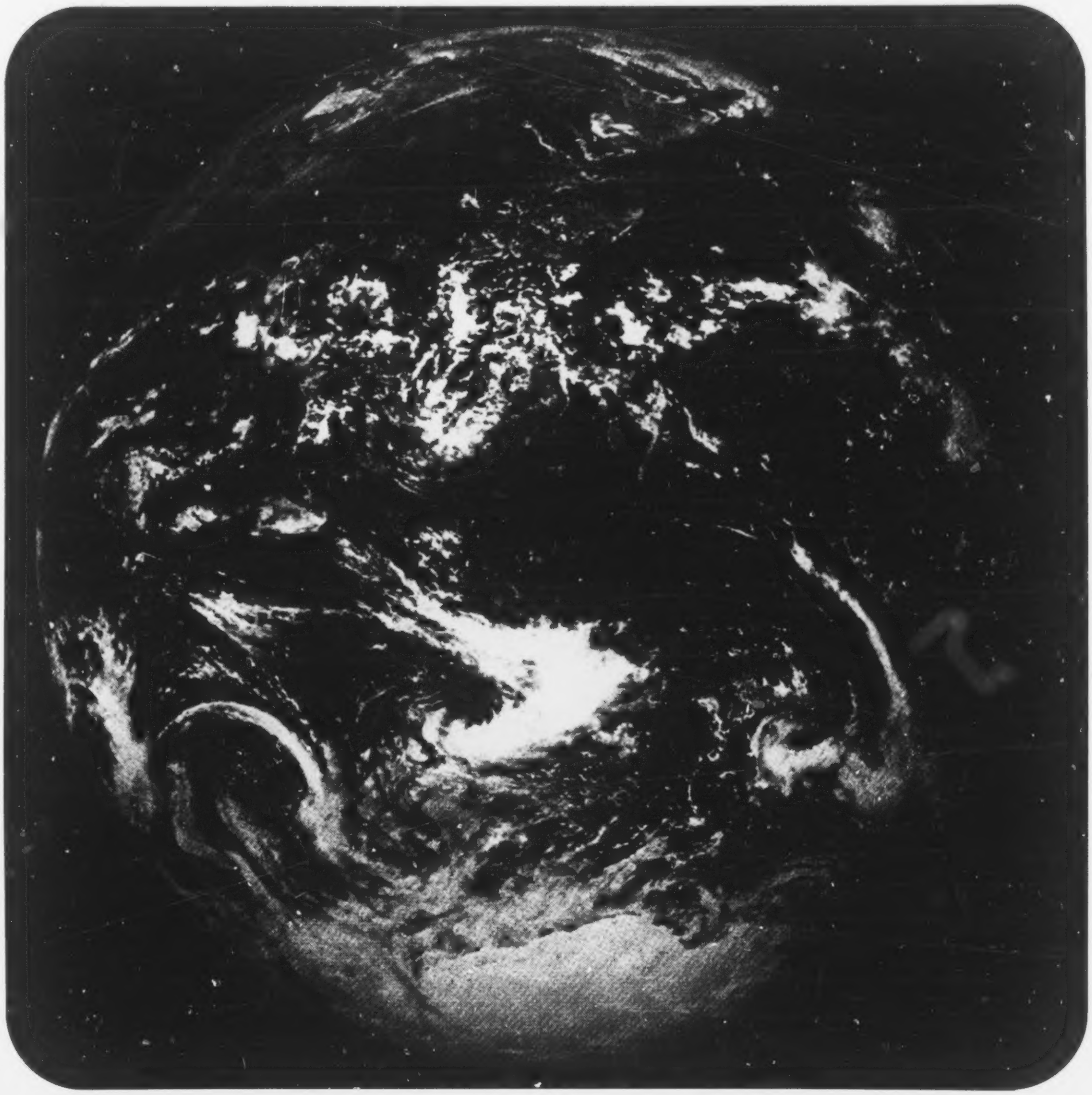

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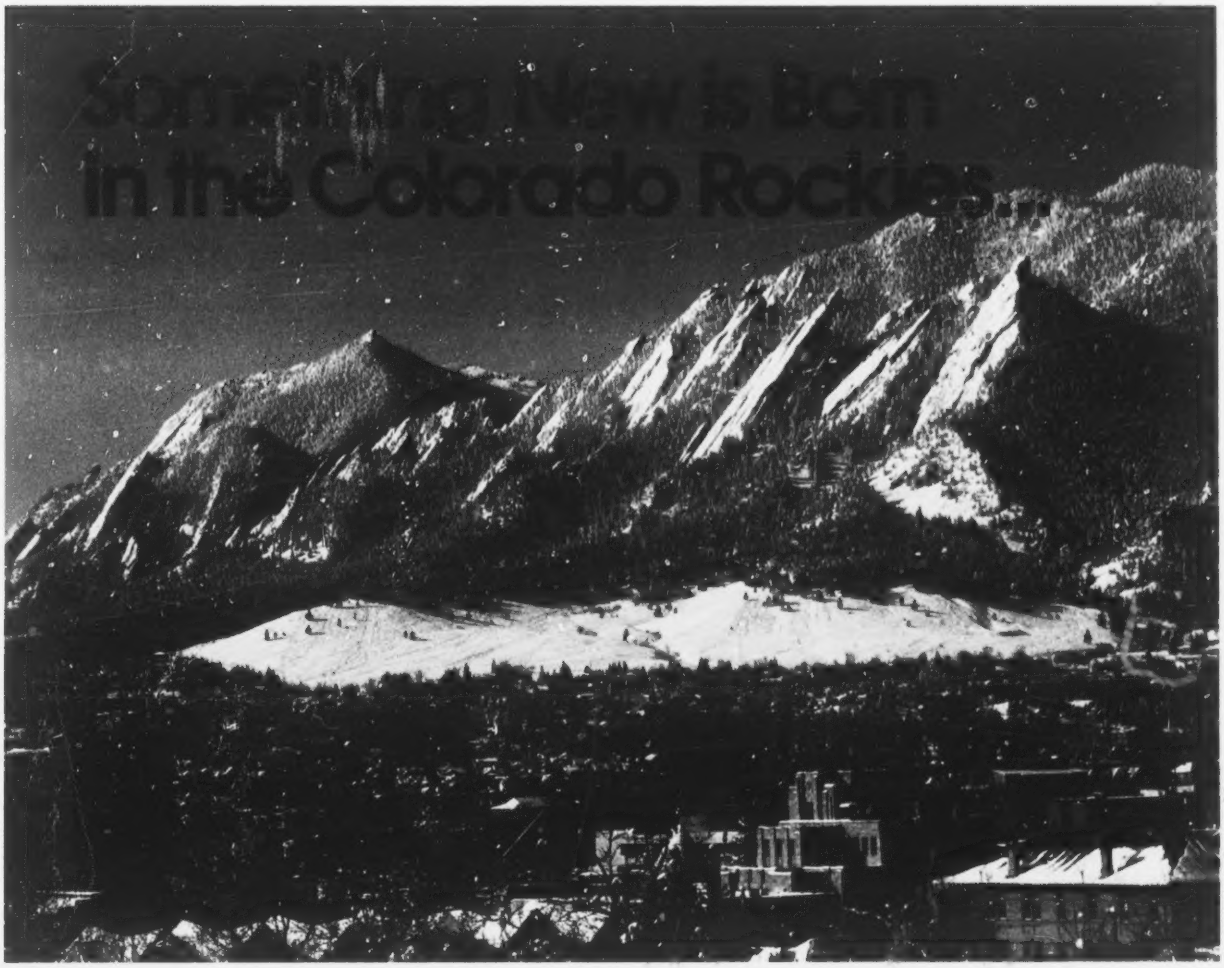

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